

Public Utilities

Volume 67 No. 9



April 27, 1961

BOSTON UNIVERSITY
BUSINESS AND ECONOMICS

FROM RUINS TO A CATHEDRAL OF SERVICE

By Frank McLaughlin

« »

Let's All Talk the Same Language

By George S. McDermitt

« »

Some Answers to the Question of Stock Dividends

By Willard F. Stanley

« »

Principles of Public Utility Rate Making

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VOLUME 67

APRIL 27, 1961

NUMBER 9



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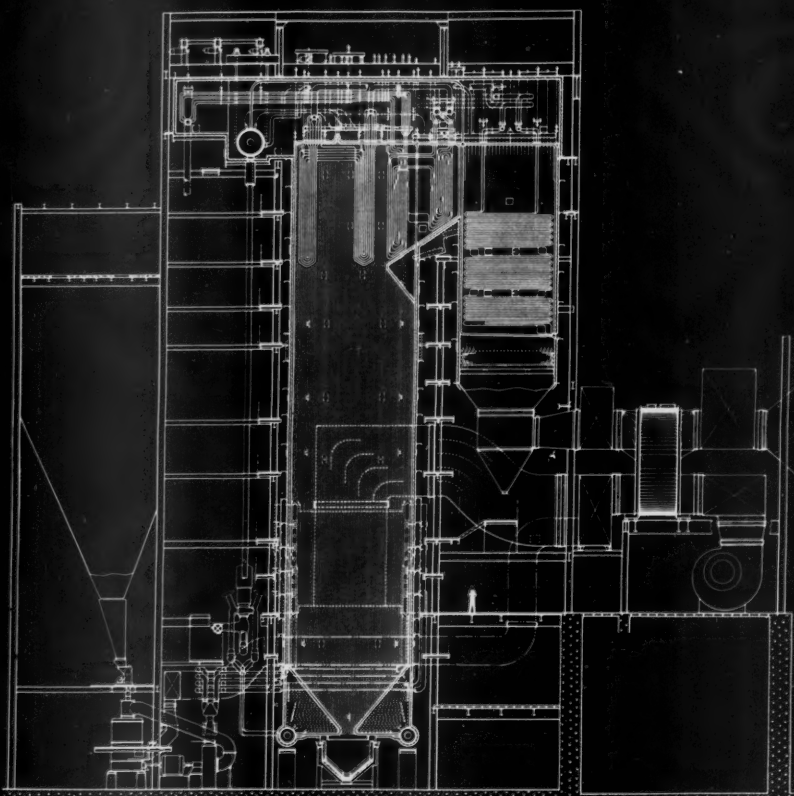
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Sectional side elevation of unit No. 4 at Allen. This twin furnace unit, fired by pulverized coal, serves a 270,000 kw turbine generator and produces steam at 2450 psi and 1050F/1000F.

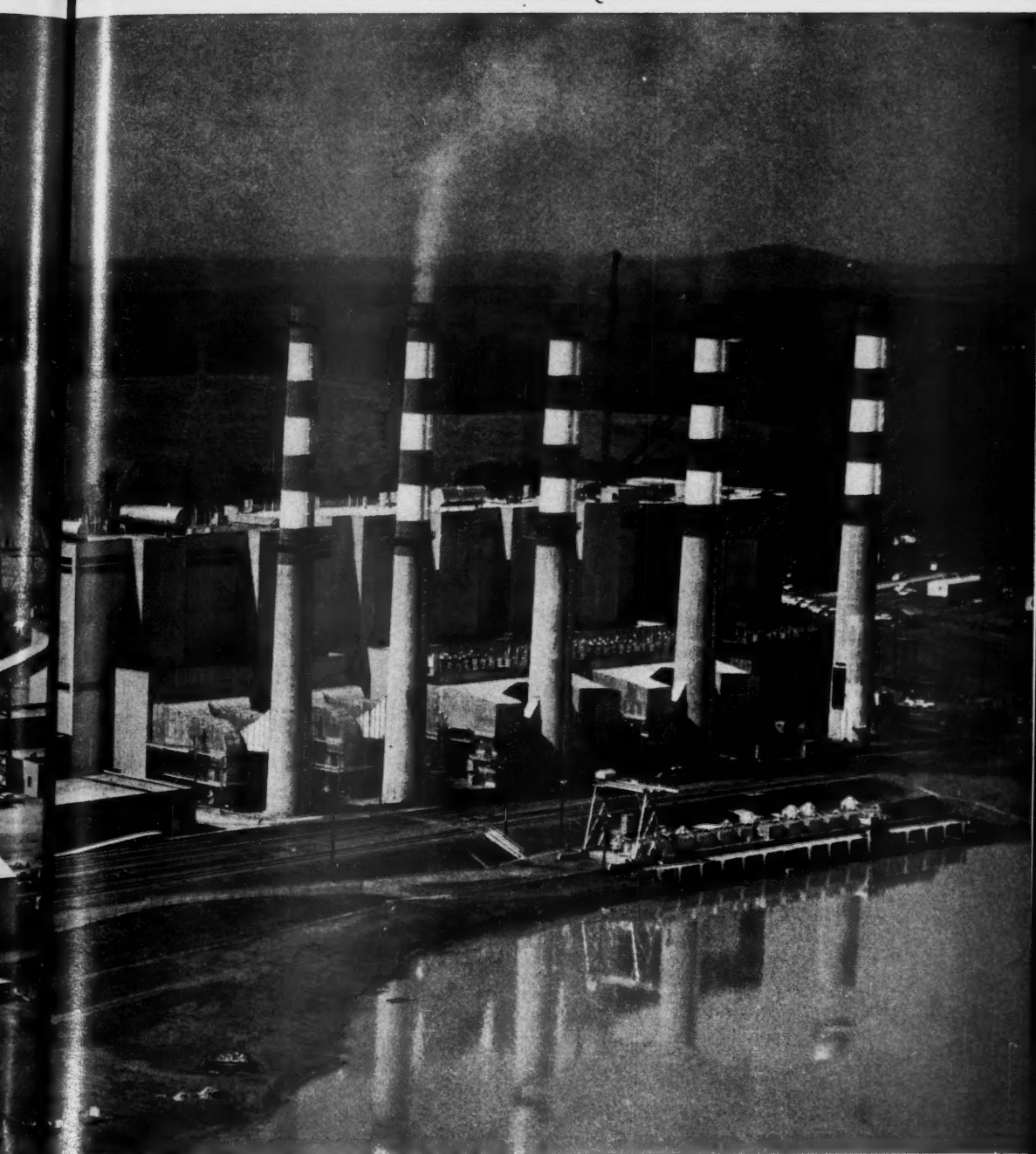
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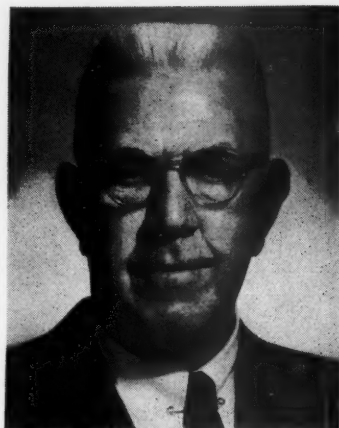
Pages with the Editors

IN an Interior Department release, dated February 14, 1961, the new Secretary of Interior Stewart L. Udall reaffirmed his belief in basic power policy principles outlined by the department in 1946 which, by act of Congress, called in part for "installation of electrical generator facilities in federal laws, where feasible, preference in power sales to public bodies and co-operatives, low-cost power rates and power disposal to prevent monopolization." To sum up this back-to-Ickes movement, Udall said he had instructed his Assistant Secretary in charge of power to give his immediate attention to (and these are his own words):

(1) Determining the proper rôle of each agency in its area; (2) expanding the planning activities of the department to make possible the timely construction and full development of new projects and facilities; (3) achieving the maximum practicable amounts of firm power for the ultimate user from federal power systems; (4) enlarging regional co-operative pooling of generation and transmission facilities; (5) planning for the early interconnection of areas served by the Department of the Interior marketing agencies with adequate common carrier transmission lines.

THESE are ostensibly sensible words, couched in well-rounded phrases. They appear to suggest a program of justifiable goals and honest intention. But to those of us who lived through the clichés of the New Deal and even before that, during the period of rampant public ownership development in the Northwest, these words and the real meaning behind them have a familiar ring. What do the government ownership enthusiasts consider to be the "proper rôle of each agency"?

WHEN Interior Department spokesmen



© Fabian Bachrach

FRANK MCLAUGHLIN

speak of assuming the "responsibility" of electric supply in any region, commercial companies fear that it may mean a federal power supply exclusively, and a "keep out" sign for private electric utility enterprise—especially in the area of new hydro-electric development. In the same light, "achieving the maximum practicable amount of firm power for the ultimate user from federal power systems" may simply mean ringing up "no sale" for all would-be commercial utility company distributors, bypassing them in favor of direct sale to politically owned and operated distributors, if not ultimate users. To the same end, of course, are the other phrases, such as "co-operative pooling of generation and transmission facilities" and "early interconnection of areas served . . . with adequate common carrier transmission lines."

YES, these words and meaning are quite familiar, yet it would be frustrating and self-defeating if the electric utility industry were to lapse into a feeling that it is now right back where it started in the days of Ickes. That would be to ignore the most amazing and impressive gains which the industry has made in the Northwest and elsewhere in the past two decades. A better philosophy for



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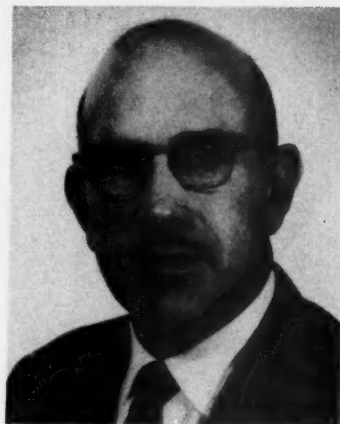
PAGES WITH THE EDITORS (Continued)

management, for investors, for faithful employees, and, most of all, for the long-suffering public—both as taxpayer and ratepayer—would be to repeat calmly that ancient truth, “this, too, will pass.”

EVEN the most casual inspection of the present circumstances must surely impress all interested, intelligent observers of this scene with certain profound and important differences between the days of Ickes and the present. Things are not the same in 1961 as they were in 1946, and no amount of repetition of the old government ownership clichés will ever make them the same. Progress has been made by the electric power companies, and they are not only here to stay, but destined to go and continue to expand to unforeseen dimensions.

THE opening article in this issue is a now-it-can-be-told story of a veteran former electric utility executive who has been through this particular mill from the very beginning—thirty years ago—when he first took over as president of the Puget Sound Power & Light Company. What happened is a matter of record, often painful to both management and stockholders to recall. During most of the intervening period, Puget lived under a “death sentence,” and as recently as 1952 there were many who feared that Puget was in danger of disappearing into the maw of the public ownership movement in the Pacific Northwest. Today, Puget has emerged bigger, better, and more secure in every way, and the story of how this was accomplished should be an object lesson for other utility companies faced more or less with this difficult situation.

THE author of this opening article is FRANK McLAUGHLIN, who first became president and director of Puget in 1931 until 1959 when he served for a year as chairman of the board. A native of Hingham, Massachusetts, he began as an office boy with the Stone & Webster organization in 1912. He rose through successive promotions to district manager, assistant manager, manager, and vice president of



GEORGE S. McDERMITT

various Stone & Webster operations in New England and the Southwest. Shortly before he became president of Puget he had been vice president of the Virginia Electric & Power Company and operating executive of Stone & Webster.


MR. McLAUGHLIN has been very active in the affairs of the Seattle Chamber of Commerce, serving twenty years on its board of trustees. Upon his retirement as chairman of the board on May 12, 1960, he was tendered a testimonial luncheon, attended by Governor Rosellini of Washington and many other distinguished guests.

* * * *

GEORGE S. McDERMITT, whose article on finding a common denominator for electric operating company terminology begins on page 589, is a cost measurement analyst with the Arizona Public Service Company. He was educated at the University of Oklahoma (BS, '42) and served with the Marines as well as with the Army (Captain) in World War II. He joined Arizona Public Service in 1946 as a junior engineer and is a registered professional electrical engineer in the state of Arizona.

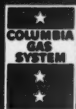
THE next number of this magazine will be out May 11th.

The Editors



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Coming in the Next Issue...

(MAY 11, 1961, ISSUE)

PUBLIC UTILITIES AND PEOPLE

For the last thirty years, technology has brought profound and successive changes in all major aspects of public utility operations of various kinds. And nowhere is the challenge of a new and better way of doing the job more pressing than in the field of human relationship between the utility and the customers it serves. Is this a relationship that can be supplanted by electronic techniques? Are all the old principles of winning friends by good deeds and friendly relations still paramount? James W. Carpenter, consultant and retired vice president of the Long Island Lighting Company, has teamed up with Robert T. Livingston, professor of industrial and management engineering of Columbia University, to give us a review of every function of utilities that may have an effect on customers and communities from the standpoint of social acceptance. The resulting conclusions are real pearls of wisdom.

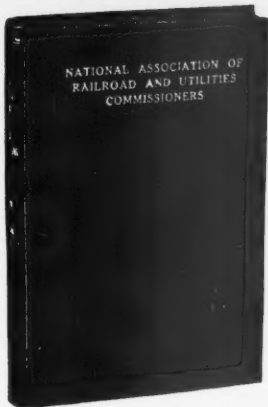
WHEN IS RAPID TRANSIT ECONOMICALLY JUSTIFIED?

Many cities today are torn between the paradoxical pressures of providing more efficient and economical mass transit facilities, while at the same time trying to cope with unprofitable transit facilities already in existence. In the last session of Congress, for example, a commission was established to plan for a modern transit system for metropolitan Washington, D. C. Yet, at this very time in the District of Columbia, the public utilities commission is considering a plea by the local transit company to expedite the abandonment of four remaining street-car routes. E. L. Tennyson, transit operations engineer for the city of Philadelphia, Pennsylvania, has endeavored to strike an economic breaking point in determining the justification of new rapid transit facilities from the standpoint of modern city planning. Typical values outside New York city have been developed from a comparison between various large cities such as Cleveland and Philadelphia. This article is a handy and thoughtful guide for transit planning.

RELATIONSHIP OF CAPITAL STRUCTURE TO COST OF CAPITAL

Do capital structures influence the overall cost of capital? This is the question studied by Professor Lionel W. Thatcher of the University of Wisconsin, School of Commerce, based on empirical studies of 116 electric and gas utilities. He covers financing done during the period 1953 to 1957, including both stocks and bonds raised in a highly competitive market. The author's conclusion is that capital structure does influence the overall cost of capital. The article deals also with the optimum structure, which is not constant but varies with the conditions of the market and the attitude of investors over the business cycle.

AND IN ADDITION . . . Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.



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Progress in the Regulation, Services, Facilities and Safety of Operation of Public Utilities; Valuation; Depreciation; Rates of Transportation Agencies; Study of Railroad Problems; Discussions on the subjects of "Duties and Responsibilities of a Public Utilities Commissioner"; "Natural Gas Rate Problems"; "The Role of Communications in Civil Defense"; "Outlook for Railroad Consolidations and Mergers"; and "Current Problems in the Regulation of Air Carriers." This volume contains a complete transcript of the addresses and committee reports of the 1960 Las Vegas meeting. The book is printed and bound in regular book cover.

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Remarkable Remarks

"There never was in the world two opinions alike."

—MONTAIGNE

JAMES F. OATES, JR.
*Chairman and president, Equitable
Life Assurance Society of the
United States.*

"It is my profound belief that nationalization of our railroads would be inevitably followed by nationalization of other carriers and later, in all probability, by the nationalization of other industries."

EDITORIAL STATEMENT
The Knoxville Journal.

"Labor laws should be amended in such a way as to force the employees of public utilities, whether publicly or privately owned, to forego their right to strike directly against the public and to submit their differences to arbitration."

A. R. LUEDECKE
*General manager, Atomic
Energy Commission.*

"In a world that is only half free the United States cannot afford to be less than first [in nuclear weapons] . . . It is a responsibility of the Atomic Energy Commission to provide leadership to assure that America, the bastion of the free nations of the world, remains in the forefront of atomic development."

JAMES R. HOFFA
*President, International
Brotherhood of Teamsters.*

"We cannot and will not allow a worker's years of faithful service to be plowed under for the sake of a new technology alone. I believe we should insist, through collective bargaining, that such a worker be retrained at company expense to operate, maintain, or otherwise service the machine that threatens to replace him."

RAY TUCKER
Columnist.

"The Federal Power Commission's slowfootedness costs the government millions in revenue, aggravates the unemployment situation, and deprives key industries—steel, aluminum, machinery, lumber—of needed orders. FPC sits for months and months on applications for new gas, oil, and other projects which would otherwise be paying federal and state taxes, hiring men, and buying materials."

DANIEL P. LOOMIS
*President, Association of
American Railroads.*

"The transportation industry exists today in an uneasy, unbalanced world—half captive, half free. There is far too much regulation . . . and it is far too unevenly applied. For example, all rail freight movements are subject to strict government economic control . . . but only about one-third of intercity truck ton-miles and less than one-tenth of inland waterway tonnage is so regulated. The plain fact is that the government has lost control over transportation. It is imperative that we slacken the regulatory bindings and give the vital carriers serving all the public the maximum chance to assert their natural advantages and carve out their own future."

Utilities Events Calendar

CHECK THESE DATES:

Apr. 27-28—Pacific Coast Electrical Association-Pacific Coast Gas Association will hold joint administrative services conference, San Mateo, Cal.

Apr. 29-May 3—National Association of Electrical Distributors will hold annual convention, Detroit, Mich.

Apr. 30-May 2—Independent Petroleum Association of America will hold midyear meeting, New Orleans, La.

Apr. 30-May 3—Air Conditioning and Refrigeration Institute will hold meeting, Hot Springs, Va.

Apr. 30-May 3—Liquefied Petroleum Gas Association will hold annual convention and trade show, Chicago, Ill.

Apr. 30-May 3—United States Chamber of Commerce will hold annual convention, Washington, D. C.

Apr. 30-May 4—The Electrochemical Society, Inc., will hold meeting, Indianapolis, Ind.

May 1—Interstate Power Club will hold meeting, New York, N. Y.

May 1-2—Illuminating Engineering Society, Inter-Mountain Region, will hold conference, Salt Lake City, Utah.

May 2-3—Wisconsin Telephone Association will hold annual convention, Milwaukee, Wis.

May 2-4—American Society of Training Directors, Inc., will hold annual conference, Philadelphia, Pa.

May 3—Pacific Coast Gas Association will hold invitational gas dispatchers and accident prevention round tables, Santa Barbara, Cal.

May 3-6—American Public Relations Association will hold annual convention, Atlantic City, N. J.

May 4—National Association of Electric Companies will hold annual meeting, Washington, D. C.

May 4-5—Illuminating Engineering Society, South Pacific Coast Region, will hold meeting, Sacramento, Cal.

May 4-5—Pacific Coast Gas Association will hold transmission conference, Santa Barbara, Cal.

May 4-7—American Women in Radio and Television will hold national convention, Washington, D. C.

May 5-7—National Association of FM Broadcasters will hold board of directors meeting, Washington, D. C.

May 7-10—National Association of Broadcasters will hold annual convention, Washington, D. C.

May 8-9—Illuminating Engineering Society, Pacific Northwest Region, will hold conference, Harrison, British Columbia, Canada.

May 8-10—Edison Electric Institute, Prime Movers Committee, will hold meeting, Milwaukee, Wis.

May 8-10—Instrument Society of America will hold national power instrumentation symposium, Chicago, Ill.

May 8-10—National Aerospace Electronics Conference will be held, Dayton, Ohio.

May 8-12—American Gas Association, Operating Section, will hold distribution and production conference, Philadelphia, Pa.

May 8-12—Edison Electric Institute, Transportation Committee, will hold meeting, Philadelphia, Pa.

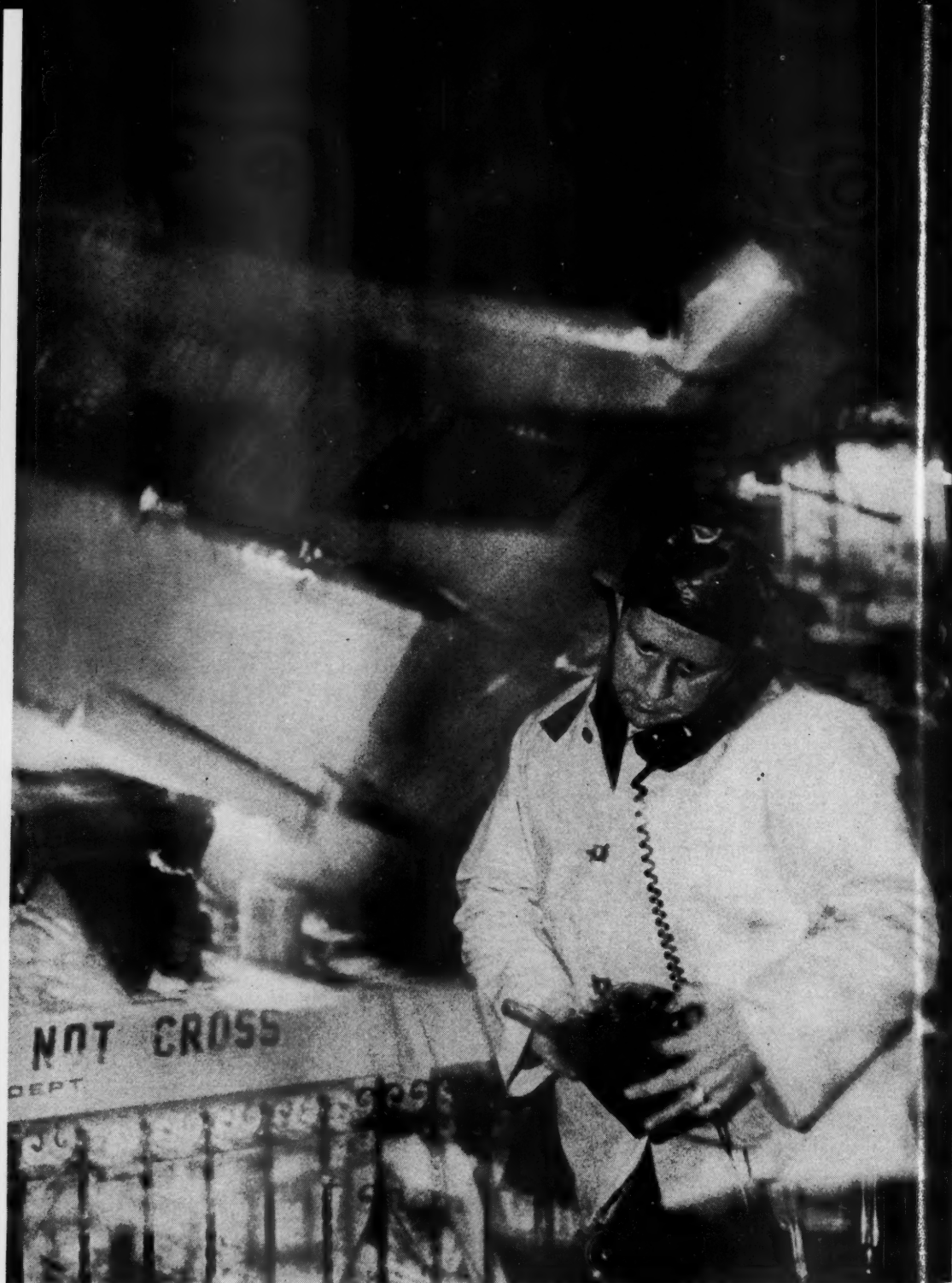
May 9-11—Indiana Telephone Association will hold annual convention, Indianapolis, Ind.

May 9-12—Mechanical Contractors Association of America will hold annual convention, Miami, Fla.

May 10—Gas Appliance Engineer's Society, Midwest Chapter, will hold meeting, Chicago Heights, Ill.

May 10-12—Edison Electric Institute, Statistical Committee-New England Council will hold joint meeting, Chicopee, Mass.

May 10-13—American Bar Association will hold regional meeting, Indianapolis, Ind.



Courtesy, New York Telephone Company

In Time of Disaster

An installer checking the fire commissioner's direct line, following the air-line collision over New York city in December, 1960. Telephone men were in action within minutes, setting up circuits to aid rescue operations.

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Public Utilities

FORTNIGHTLY

VOLUME 67

APRIL 27, 1961

NUMBER 9



From Ruins to a Cathedral of Service

A case study by an author who for nearly three decades was the chief executive officer of an electric utility company which spent years under the shadow of public ownership since the very first New Deal—only to emerge triumphant and more secure than ever.

By FRANK McLAUGHLIN*

ON April Fool's Day 1931, I became president of the Puget Sound Power & Light Company. Virtually at once I was captivated by the idea that I must have been one of the "600" in Tennyson's famous "Charge of the Light Brigade," because "there were cannons to the right of me, cannons to the left of me, and cannons in front of me, volleying and thundering." I was stormed at with shot and shell from the briar patches and brambles—the bulrushes—the thickets—the hedgerows—the back alleys—in

fact, from every source of unexpected ambush.

Talk about contrasts; I had recently occupied a similar position with the Virginia Electric & Power Company in peaceful, tranquil, conservative Virginia, where fighting was confined to conversation about the "War between the North and the South." Then, lo and behold, I was suddenly catapulted onto the deadliest electric power battlefield in the nation, and into high adventure more thrilling and exciting than any fiction!

AT that time the country was staggering from the depths of the Great

*Director and consultant, Puget Sound Power & Light Company; formerly president and chairman of the board. For additional personal note, see "Pages with the Editors."

PUBLIC UTILITIES FORTNIGHTLY

Depression. Scapegoats were sought in explanation of the almost-fatal economic sinking spell, and among these the whipping boy subjected to the most merciless assault was the electric utility industry. All segments of private power suffered for the malperformance of those in control of several holding companies.

For this, and other more fundamental and historic reasons, Puget Sound Power & Light Company paid greater penalty and came closer to extinction than did any other similar concern in the country. In order to place in perspective the solution to the life-or-death problem with which we wrestled for almost three decades, a brief sketch of background is necessary.

As the industry well knows, the Pacific Northwest was—and still is—the nation's greatest reservoir of undeveloped hydroelectric power. That fact represents a blessing, true, but it also made our region a natural focal target for all those minority interests and political demagogues determined collectively that government ownership, local and national, of the electric utility industry should come about. Not the least motivation here was use of this great natural resource as a "springboard" to public office.

The Socialistic Trend

FERTILIZED by the desperation born of depression, the Pacific Northwest, and the Puget Sound area in particular, was fallow ground then for the proposition that Socialism offered sole and rightful means for resolvment of the so-called "power issue." A sizable portion of the population was receptive to such idea because of nationality background in European co-operative movements, together

with vigorous political agitation. There was the traditional far western distrust of "eastern money interests," spurred by demagogues who cried that the heritage of the people—in the form of "magnificent rivers from majestic mountains"—was being "seized for private gain by Milk Street (Boston) and Wall Street (New York)."

There had been unwise and improper management practices prior to 1930. There had been a street railway sale to the municipality, which aroused a long-sustained suspicion and bitterness in Seattle. There had been sales to people in the company's territory of preferred stock, the market price of which dropped precipitously during the depression. This caused a bad reaction among local stockholders.

FROM the beginning of the century, while the private electric utility company was bemused by interurban—street railway and industrial power load cultivation—the municipal systems of Seattle and Tacoma were thus enabled to expand at will in the domestic field. By 1930, the Puget Sound area undoubtedly was the major stronghold of publicly owned power in the nation.

Thus was the stage set for authorization, by vote of the people of Washington in 1930, of county public utility districts. These districts, among other powers, were given the right to condemn private power systems piecemeal, and to issue and market revenue bonds in unlimited amount. This they could do without reference to the people—an authority extraordinary in all the annals of American politico-governmental agencies.

FROM RUINS TO A CATHEDRAL OF SERVICE

FINALLY, with the private power industry as a whole in the "national doghouse," there came the entry of the federal government, in massive and unprecedented scale, into the electric power industry of the Pacific Northwest. The regional federal power agency, acting on instructions from the national administration of the day, immediately embarked upon a program designed to substitute public for private power in all areas and at all system levels, from and including generation to and including neighborhood distribution.

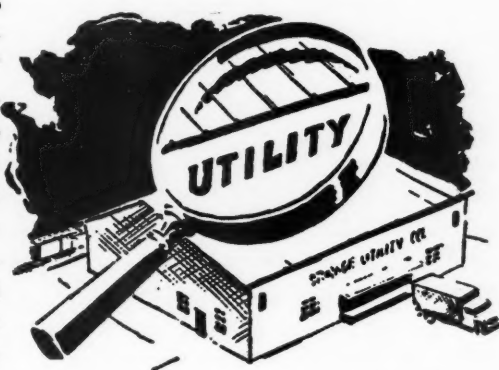
Naturally, as it was in the heart of the municipal ownership belt, and because public sentiment was believed favorable, Puget was marked for initial destruction—a projected fate regarded by public power zealots as "the key to regional victory." For many years we were forced to operate with the "Sword of Damocles" hanging over our heads. We were "hamstrung" and "hog-tied"—while "sitting on a keg of dynamite"—and victimized by the public power actions against our property.

How Puget Survived

THE public power advocates did not think it possible for the company to steer a steady but difficult course of survival between "the whirlpool of a merger" and "the rocks of condemnation and confiscation." It is vastly satisfying now to be able to report that we of Puget won our struggle for survival and the right to continue in the people's service. But it was a long and taxing fight—the details of which are many and varied—and often astounding. For many more years than pleasant to recall, most of the

sources of development capital would not have wagered "a plugged nickel" on Puget's chances. I do not need to elaborate on the effects of such a situation for a private corporation. Nevertheless, this roadblock—and many more as critical—were surmounted or eliminated. The foundation on which such victory was built, and the tools with which it was fashioned, pretty much constitute my answer to the question: "What should and can be the future of the electric utility industry, and how may it be insured?"

As one who has experienced three decades of desperate struggle to save a private company from engulfment by public power, I am convinced that the verdict on our labors is to be earned and found only in the mass mind of men of good will—and the mediums of communication. It is the people who, in the long view, determine the health and destiny of a public service institution—privately or publicly owned. Surely, this is as it should be—for the virtual all-electric community—and country—confronts the power industry with a responsibility far beyond its own of the past—and far surpassing



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the burden of any comparable activity. This is a fact of amazing proportions.

The extent to which the people of today place their faith in the ability of the electric utility industry to perform adequately in war, as well as peace, is unequaled in man's long history. I am sure this is a sobering thought for all of us.

I believe it no exaggeration to assert that this trust is so all-encompassing, so fraught with vital significance to all our people, that we must regard it sacredly. This being so, the quality of the performance of the electric utility industry, conventional or nucleonic, must naturally be measured by a great deal more than the usual yardsticks of operation.

It is presently indicated that the future of the industry can be bright indeed. This will be determined, in largest degree, by the quality and nature of the leadership of the industry, and the leadership of the states and of the nation.

The complexity of the times in which we live creates an urgent and far-reaching demand for leadership. These requirements will be met when every American practices the art in his own life—in his home—on his job—and in connection with church and school, and public affairs in general.

Some Guiding Principles

DURING many years of "cliff hanging"—which came to be known in somewhat sober jocularly as "The Perils of Puget"—I believe we demonstrated validity of several basic precepts. Three in particular, I am satisfied, are vital to the future of the industry as a whole:

One. Only by the will of the people can a private utility in the public service field

exist and prosper. We must ever be faithful to the responsibilities we have accepted, and dedicated to an ideal—"The Great Cathedral"—a vision of community partnership, not only hoped for, but vigorously worked for!

Two. Only through truth—whole and undiluted—and the utmost candor as to aims and advantages of private enterprise, can the confidence and support of the people be earned, deserved, and maintained.

Three. Only through wholehearted cooperation among all electric utility segments—private and public—government, national, and local—and with due regard for the people's aspirations in all fields of endeavor, will our industry achieve fullness of potential accomplishment and appropriate reward for its services.

I WELL realize I am not espousing a corporate way of life hitherto unknown to the electric utility industry. It is blessed with a goodly supply of high-minded and able leadership deeply conscious of its public—as well as its private—obligations and responsibilities. And it is, of course, this leadership which largely will determine the scope of the industry's future.

As often has been said: "The man is not indispensable; but leadership is."

And, as noted, the tone and quality of such leadership are and will continue to be determinate!

Puget was preserved in the public service—and its policies and practices finally publicly ratified—because for more than a quarter of a century its management appealed to the people with facts, fairness, and frankness. After more than

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two decades of truth telling, careful and considerate and usually kindly — but brutally incisive when occasionally necessary—the will of the people was crystallized and it prevailed. This was conclusive and covered even the never-never field of politics—and was a remarkable reminder that the private company supplying electric service should be forever aware that the politician is but the creation and creature of the people. He responds in public affairs to that will and to his own conscience—and properly to nothing else!

Recent Danger

ONLY relatively a few years ago, the whole of Puget's magnificent system was threatened by condemnation and confiscation—federal, PUD, and municipal. As a result, the company was forced to dispose of a portion of its distributive properties, and thousands of customers (notably in Seattle and Snohomish county). In some cases it was necessary to sell property in order to keep the com-

pany's "head above water." But, significantly, despite years of controversy, the company suffered no financial loss—as in the disposition of property, Puget received fair prices.

As a matter of fact, gains were made over the long haul from 1931 to 1960. Electric plant value increase was over \$100 million, or about 110 per cent, despite almost \$60 million in forced sales and large power purchase contracts. Annual gross revenue almost doubled to in excess of \$36 million. Despite customer losses, we had over 225,000 customers, or around 45 per cent more than twenty-nine years before, and average residential annual kilowatt-hour use jumped approximately eight times, to almost 9,000. Annual kilowatt-hour output, and yearly peak demand both tripled during the period.

In the end, by public consent, condemnation efforts were abandoned, and, subsequently, when powerful financial and "foreign" utility interests sought to force Puget into a merger, the people of the

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company's operating area arose militantly to its defense. They made it clear, abundantly so, that they wanted it maintained as an independent, locally managed, privately owned electric power system dedicated to the public service.

THE people went further. They made all concerned acutely aware that they wished to avoid dominance of the industry by either private, municipal, or county public utility district systems—and that, above all, they did not want federal regional direction which would entail area-wide economic control. It was, in my judgment, a people's victory of a definitive nature. As Washington's senior Senator, Warren G. Magnuson, said to me in a letter, dated December 14, 1953:

I have always thought that our real problem here in the Pacific Northwest was not only the development of kilowatts, but the right kind of kilowatts—cheap kilowatts. That has been our competitive advantage. I have come to the conclusion that our real future lies in the development of both private and public power, which would produce those kind of kilowatts. It was, therefore, with a great deal of satisfaction that on that day in the public press I read your announcement that you felt we could have a partnership that could do the kind of a job that was necessary for the economic potential of this whole area. I want to compliment you on it and I want you and your stockholders to know that this is the kind of thing that we all have been talking for years. There's no reason why such a fine private power organization as yours cannot live to-

gether in the development of our future.

DECISION, however, did not spring full-blown from the public mind. It came after years of contest between two leaderships, poles apart—the one seeking socialistic-governmental ownership and controls—the other striving to maintain the “climate” for free enterprise, individual opportunity, private property, and civil rights.

The decision, once made, was an endorsement, in fact, of the practices and policies followed and openly advocated by the leadership of Puget for many years. Decisive public approval came from a well of earned good will. Such a reservoir of neighborly esteem is the best and truest depository of insurance of the future for the man, or company, in the public service.

Puget's Tools of Leadership

POSSIBLY I can best project my thoughts on the future course management in our industry should follow, by describing the tools and method used by the leadership of Puget in winning its fight for life and back to tip-top condition. For twenty-nine years Puget persistently lowered its rates until they are now more than 60 per cent less than in 1931, and 50 per cent below the national average—lower than the vaunted TVA “yardstick”—and substantially competitive with subsidized public power in the company's area. All the while, because of the high standard of service, sound load building, and the greatest expansion of facilities possible, Puget's customers grew in number, as related, and each used more energy annually. The company decentralized op-

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erations by relocating its offices and distribution centers for convenience of the people and in the interest of efficient and economical system functioning. We built our headquarters and subheadquarters where our customers were—and placed our line crew distribution buildings so as to reduce travel and establish our employees throughout the territory as neighbors of customers.

I HAVE stressed co-operation. Puget practiced it to the limit and to an extent unmatched, I believe, in the nation. We urged and obtained formation of the Puget Sound Utilities Council—composed of Puget, Seattle City Light, and Tacoma City Light and two major contiguous public utility districts—Snohomish and Chelan. This agency, in which each member is operationally autonomous, is a planning and engineering organization through which private and public power alike have guaranteed to meet the Puget Sound-Cascade region's maximum demands for power. The council also maintains a power pool, which has distinct advantages.

Puget aided in preliminary financing of certain major PUD hydro projects on the Columbia river, and also contracted with the districts for its power needs for years into the future—over and beyond the product of its own new generation.

PSUC also maintains, on behalf of all of its members, a constantly functioning study group in the field of atomic electric power, although it is likely true that the Pacific Northwest will be the last region in which nuclear-produced electricity will become economically competitive with the hydro product. Never-

theless, Puget, along with other private companies of the nation, financially supports and participates in studies as a member of High Temperature Reactor Development Associates, Inc. "HTRDA" has signed a \$39 million contract with the United States Atomic Energy Commission for construction of a 40,000-kilowatt prototype station, to be the world's first high-temperature gas-cooled nuclear power plant (on Philadelphia Electric Company's system).

A New Concept of Washington State

THIS co-operative effort of private and public power has met with overwhelming public approval, and it caused the famed writer, William Hard, to say in *Reader's Digest*:

My favorite American region, right now, is the Pacific Northwest . . . it contains the most vigorous effort now existing in the United States toward getting away from undue dependence on the federal government and toward a renewal of local self-reliance. . . . This is a shot that should be heard around the nation.

(We have come a long way since Jim



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Farley described Puget's home state as "the soviet of Washington.")

Not alone through such comment did Puget's leadership appraise the public attitude. Through repeated polls, conducted by Louis Harris and Associates, independent of the company, Puget plumbed public opinion and sought to know the wishes and reactions of the people. When indicated, remedial action was taken at once. We found this method of measuring regional sentiment to be of great value. By its results, we were guided in eliminating error and preserving virtue.

HEALTHY labor relations are essential, of course, and the requirement here is constant, skilled, and sympathetic attention. Only thus may the welfare of employees, their rights and rightful future, be maintained in compatability with an electric utility's vital need to take full advantage of laborsaving devices and expanding electronic automation, if customers are to get the best possible services at the lowest cost.

The electric power industry should be the leader in community and regional development. Over the years Puget advertised in national publications the potentials of its area for new industry—it sponsored visitations of business leaders to other parts of the country for promotional purposes—it made available to all its area communities the services of industrial survey and development authorities. Puget also had surveys made to determine industries best suited for the area and most desirable for particular locations. The public is quick to appreciate such mutually beneficial activity in this field in which any electric utility can be a "natural leader."

I URGE full participation by the industry in public affairs. When a utility's welfare is directly, obviously, and unavoidably affected politically, then it should act openly in its own behalf through customary and proper channels. It should insist upon all corporate and civic rights properly its due, and, in regard to government and legislative bodies, should openly exercise all the rights and privileges accorded good citizens. Try to be sure of a sound position—then fight for it—and be wholly candid, as I have urged, with the public always!

The Utility's Public Relations Duty

THE utility company must be non-partisan, ageless, and color-blind in extending its hand of friendship. It may have to be, on occasion, a combination of a big brother and a Dutch uncle and Biblical Job. But the end goal is the same—the good will of the public. If it has this, it need fear no government inquiry, no political reprisal. If it has this, no critic can prevail, no hostile action can destroy. For as a leading member of the U. S. Senate put it to this author, "if the people are with you, who else can be against you"?

An electric utility, to wholly and successfully meet its obligations, must build and maintain what I think of as "organization character." In this regard, it must be second to none in its community. It must look good—and it must be good! Forget the term "quasi-public service." Electric utilities, even when privately owned, are *completely* in the public service.

Only by dint of faith and hard work, and the magnificent resoluteness of the men and women of our company, were

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we able to see Puget survive its "darkest hours." Through it all, I looked to the institution, to the people who make it up, to the families and industries of the area it served, and I dreamed of the untold future ahead for all of us. And so, notwithstanding the evils which beset us, I had to conclude that Puget should continue because of its basic merit! For to turn back would have been to deny a destiny that cried out from the wilderness every long hour before the dawn.

THUS, we moved ahead, and the company today is in the best shape ever. The rewards for all concerned have been very substantial. For instance, the market price of Puget's common stock currently is almost 100 times greater than in 1933. Dividends on the common stock have gone from nothing in 1933 to \$1.56 per share at present (equivalent to \$2.34 after adjustment for the stock dividend paid in 1955). The present common stock was issued in exchange for the company's former \$6 preferred stock in 1943, with eight shares of common given for each share of preferred.

This was accomplished by a leadership which never wavered from its faith that right could prevail if its way be cleared by persistent advocacy of sound and basic principles. We of Puget decided long ago to be "cathedral builders" for mankind—rather than "money-changers in the temple." Into the building have gone fruitful labor and service for public benefit. It has resulted in what we like to think of today as "the high character of Puget Power."

The Declaration of Faith

THIRTY years ago, at the outset of Puget's long struggle for survival, I penned a "declaration of faith" which appeared over my signature as company institutional advertising in all the newspapers of our area. It was based on the parable of the men building a cathedral. "What are you doing?" they were asked. "Laying bricks," one replied. "Making \$12 a day," answered the second. But the third, gazing upward at the rising majesty of the mighty pile, replied: "Building a great cathedral."

Then I addressed the people of Puget's

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territory in this way: "We, too, are carrying bricks; we, too, are engaged in the business of earning a living and, like the third workman, we feel that we also are building a great cathedral. Ours is an ever-rising structure of public service that brightens lives, increases happiness, multiplies man power, and motivates industry throughout the rich and rapidly developing territory it is the privilege of Puget to serve.

"Not alone for today—not alone for next year—must our plans be laid to meet the electrical needs of our domestic, commercial, industrial, and agricultural customers. Far into future years must this program be charted to care adequately and efficiently for an increasing population, new and growing industries, and a greater public service.

"**W**E in this organization fully recognize this responsibility, which is placed squarely upon our shoulders. Our management must be the active, vital force which takes men, money, and materials and puts them to work to render a useful service for the benefit of the public which buys, of the investor who advances the money, and the employees who labor for the success of the enterprise. To successfully fulfill our obligations means that:

"The people we serve should obtain courteous, prompt, reliable, and efficient service at the lowest possible cost;

"Those who put their money in the enterprise should receive a fair return on their investment;

"We should have employees who are fairly compensated for the work they do—who have the necessary technical skill—

who are in complete sympathy with our ideals of public service, who are good citizens you will be delighted to have as friends and neighbors.

"This is the cathedral we would build. And as we build, we join with the people of the entire state in constructing another cathedral—a greater state of Washington—a mighty edifice of rich resources, of great industries, and of useful institutions — the home and playground of a happy people."

YEARS later, after Puget had won its victory as well as renewed well-being and strength, and was dedicating a new and splendid headquarters building, I publicly said:

We all know that any community or institution can exist only by consent of a democratic society—that what people get they must receive from a system that places the highest premiums on free choice. We can achieve only with the active support of our fellow citizens. . . .

There is an important lesson in this for a corporation such as Puget. We know that a company today must pay careful heed to safeguard the democratic system of privileges and responsibilities, of freedom and obligations. We must do this at all times—even in areas that ordinarily would at first appear to be beyond the immediate corporate realm.

Corporations are essentially economic-action institutions in our society. They must venture and they must risk in order to produce. But in this operation corporations must take care to recognize the rights of others they do

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business with. This means that while recognizing their right to bargain with labor, corporations must also recognize labor's right to bargain with management. While realizing that a balance must be obtained between industrial and agricultural prices, they must also recognize the right of farmers to a fair return. While recognizing that consumers should pay a price which yields fair profit to the corporation, the company must bend every effort to make sure it maintains prices at the lowest possible level.

But it is not enough that we simply add to this area's economic health and growth. Ours is also the obligation to contribute to the spiritual, moral, and social well-being of all communities and their people—and at all times to be a good citizen.

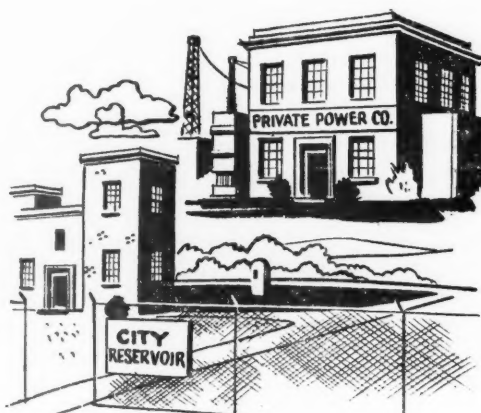
The Proper Rôle of Government

A CENTRAL pivot of the nation's economy has come to be the necessarily ever-expanding electric utility industry. Due to ceaseless research, the challenges

of new horizons are constantly being met through ever-increasing areas of use and a steady stream of new applications. The electric utility industry is a bulwark for national security—a self-starter in the planning and building of new industries—a provider of adequate electricity for the satisfaction of human wants. These are mighty ingredients that make for a richer, fuller, better life for all.

WHEN this concept is acknowledged under a system which fundamentally respects the dignity, worth, and freedom of every human being, then we of the electric utilities may know we are succeeding in a job that has earned the confidence of our share owners, our employees, our customers, and all of our fellow citizens.

Anything so basic as electric service, must of public necessity be enabled to be healthy and to thrive. It would be catastrophic if the electric utilities were in any way prevented by man's shortsightedness from being strong and dynamic. To fulfill their responsibilities, utilities must be maintained in sound financial



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health through reasonable rates and dynamic and farsighted management.

THE public service commission of the state of Washington, under the able leadership of Chairman Francis Pearson, follows a policy of treating both the public and the utility company fairly—recognizing that so doing best enhances the people's welfare and makes for the development and growth of the state.

A stark conclusion, arrived at from my thirty years of experience in utility management in the Pacific Northwest, is that government should not directly—or under any pretext or subterfuge—engage in the generation or distribution of electric power. Along with electric power produced by the government, go stifling economic and other controls, so that a community or region is unable to stand on its own feet and to achieve its rightful destiny—and the people are put in a "strait jacket" as to what they can and cannot do.

THIS is in direct violation of the concepts on which this country was founded and circumvents all opportunities for growth—both personal and other-

wise. The people of this region do not want government to regiment their lives or control the economy of the state. Any power available as a by-product of flood control, navigation, etc., should be sold on a fair, co-operative basis to local utilities—both private and public.

Better yet, the government should enable the local utilities to build major power projects, with the government only providing facilities for irrigation, flood control, and the like, as may be required. Co-operation between local public agencies and the private electric companies in the building of huge power projects has been very successful and beneficial to all concerned in the state of Washington.

ELECTRIC utilities have performed magnificently and will continue to be a vital factor in this country on behalf of the people's welfare, assuming the federal and state governments adhere to the precepts of the Founding Fathers and the American heritage is preserved. If government proves unequal to the challenge, then it will not be the electric utility interests alone—but every enterprise and every man and woman in the nation—that will be sacrificed.

Faith without Work Fails Socialists

"THE times seem to be increasingly bleak for the Socialists, as witness the rueful comment of Professor John Kenneth Galbraith that in India, 'it is the Socialists who are responsible for the paralyzing belief that success [in industrialization] is a matter of faith, not work.' How many of the Belgian Socialists . . . striking against government austerity programs brought on by the liberation of the Congo were critics of Belgian imperialism in Africa?"

—EDITORIAL STATEMENT,
The (Baltimore) Sun.

Let's All Talk the Same Language

A tendency towards language proliferation is nowhere so maddening as among professional specialists, such as engineers, accountants, lawyers, financial men, etc., engaged in the same overall business and often talking about the same plant property or system as in the case of a public utility. This article deals with setting up common denominators for words which might otherwise have different meaning to different people.

By GEORGE S. McDERMITT*



FOR years, the various departments of public utilities concerned with their companies' construction activities have been separated by language barriers. The accountant talks of property records, loading factors, double entry bookkeeping, assets and liabilities, capital investment, and plant accounts. The engineer speaks of construction standards, cost estimates, standards sheets, and installation costs. The warehouseman converses in terms of material by class and item numbers.

The line crews and their supervisory personnel speak of crew hours, crew days, and jobs completed. The accountant, the engineer, the warehouseman, and the line crews are all trying to reduce the cost of construction. How can we devise a common language, or if you prefer, a common denominator so that all of these professions will use the same

nomenclature? With better communications, we can increase by many fold the *possibility* of reducing costs.

WHY not adopt a method utilizing a common terminology throughout the company—or even throughout the industry—that would eliminate the existing language barrier and at the same time result in a more efficient operation? As a by-product, you could also more easily evaluate the effectiveness of the construction and engineering personnel. Numerous utilities have accomplished various phases of this concept, and I firmly believe that these various facets can be molded together to bring about a compatible relationship among accounting units, retirement units, work measurement units, and construction specification sheets. Can it be done?

Let us define this hypothetical unit applicable to all of the areas of operation as a "compatible unit."

*Engineer, Arizona Public Service Company. For additional personal note, see "Pages with the Editors."

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ARE these the prerequisites of a "compatible unit" in these departments?

1. In Engineering:

The engineer must be able to utilize the compatible unit as a means of estimating work orders or job orders conforming to the company's construction specifications.

2. In Warehousing:

Depending upon the magnitude of the compatible unit, stores must be able either to receive or issue material by entire units or segments thereof. As for example—a crossarm with pins, bolts, and braces, or only a crossarm.

3. In Purchasing:

The compatible unit must be of such a grouping of materials that vendors can supply it intact without a penalty. Sometimes this is preassembled and often it is prepackaged. As for example, the vendor will ship the crossarm with braces, pins, and bolts as a package or assembled.

4. In Construction:

The construction forces must be able to readily recognize and report the additions and removals of utility plant by the compatible unit or any segment thereof.

5. In Accounting:

The compatible unit must be acceptable to accounting as a means of fulfilling its functional responsibilities regarding the addition and retirement of utility plant as well as operation and maintenance. This is required by regulatory authorities.

6. In Measurements:

The compatible unit must provide a means of measuring not only the quantities, but also the effectiveness of the work done by the operation or construction forces.

With problems of this magnitude, it is better to start with a simple premise.

The selection of compatible units for acceptance by six different departments will be greatly accelerated if we use a simple illustration. For example, in account number 392—transportation equipment.

"A Truck Is a Truck Is a Truck"

KEEPING our compatible unit in mind, point out a truck to a six-year-old boy and ask him what it is. He will tell you, "it is a truck." Ask the purchasing agent what he is buying and he will tell you, "a truck." Ask the accountant how he carries it on the property records and he will tell you, "as a truck."

Now, this truck contains numerous items which must be replaced periodically due to breakage, obsolescence, or wear and tear; and no one questions whether the charges for these replacements should be allocated to plant accounts or expense. It is common knowledge to the accountant, engineer, warehouseman, and garage foreman that it is expense. They know a truck is a unit of property comparable to our compatible unit. They know a truck is an addition or retirement in its entirety to utility plant.

Can we continue our line of reasoning along this channel and investigate the feasibility of formulating acceptable compatible units in our mass property accounts, such as transmission and distribution?

THE property retirement units as defined by the Uniform System of Accounts are rather broad; yet, from an objective analysis, one can perceive the probability of correlating our compatible units with these retirement units, either in part or in whole.

LET'S ALL TALK THE SAME LANGUAGE

ARIZONA PUBLIC SERVICE COMPANY



FIGURE 1
GUY STRAIN INSULATOR ASSEMBLY



FIGURE 2
DOWN GUY

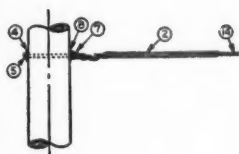


FIGURE 3
SPAN OR HEAD GUY

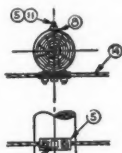


FIGURE 4
INTERMEDIATE POINTS

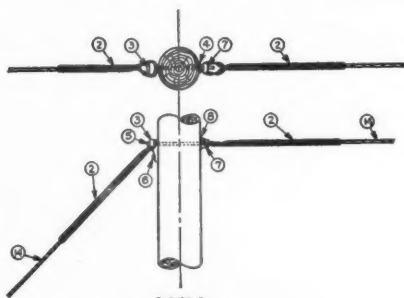


FIGURE 5
SPAN OR HEAD GUY AND
DOWN GUY

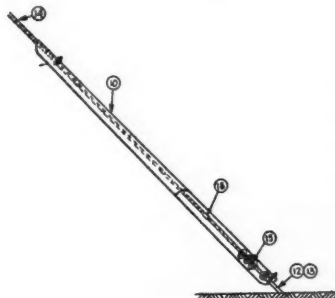


FIGURE 6
GUY WIRE PROTECTOR

ITEM	QUANTITY						DESCRIPTION	STORES NUMBER	PLANT ACCOUNT
	1	2	3	4	5	6			
1 P	1						INSULATOR, GUY STRAIN	332-4180	354
2 P	2	1	1	2			PREFORMED GUY GRIP - 3/8"	330-3605	354
3 P	1						GUY HOOK (M.I.F. - P-135A OR EQUIV.)	330-3631	354
4 P	1	1					CURVED WASHER - (3" X 3" - M.I.F. - PINS OR EQUIV.)	330-7120	354
5 A	1	1			1	1	5/8" GALV. MACHINE BOLT (LENGTH AS REQ'D.)	330-	354
6 A	1						1/2" X 4 1/2" LAG SCREW (SEE NOTE #1)	330-5372	354
7 P	1	1					SPAN GUY HOOK (M.I.F. - P137-A OR EQUIV.)	330-3634	354
8 A	1						SQUARE WASHER	330-2504	354
9 A						1	GUY CLAMP - THREE BOLT	330-3575	354
10 P						1	GUY GUARD	330-7154	354
11 A						1	5/8" EATON DOUBLE COIL LOCK WASHER	330-	354
12 S						1	ANCHOR ROD	330-	354
13 S						1	ANCHOR	330-	354
14 S	*	*	*	*	*	*	STEEL STRAND GUY WIRE - 3/8" H.S.	330-7532	354
15 A						1	GUY CLAMP - THREE BOLT	330-2504	354
16 A							GUY CLIP	330-2643	354

* AS REQUIRED

REFERENCES:

- 1 - ALTERNATE GUYING DETAILS - DWG. - C-311
- 2 - TO REQUISITION MATERIALS - SEE PAGE 1.10

NOTES:

- 1 - ITEM #8 OMITTED WHEN ITEM #3 HAS IRON POINT TO PIERCE POLE
- 2 - KEEP ALL TAPED WIRE FROM CABLE GRIP AREA

PREFERRED
GUYING DETAILS

C-310

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The Uniform System of Accounts for transmission and distribution, for example, sets forth many retirement units unquestionably similar to our truck, such as:

1. Lightning arresters
2. Towers
3. Circuit breaker
4. Disconnecting switches
5. Transformer
6. Overhead service
7. Meter
8. Pole, wood, steel, concrete, or other material

A pole is a pole is a pole, but why is it that the minute the construction forces decorate a pole with material according to construction specification sheets, the mutual thinking dissolves into many dissociated courses of action, each taking a different path, but all directed toward the same goal—that is, additions and retirements to utility plant.

CONSTRUCTION forces are constantly changing plant in service with the use of a time-saving device called pre-engineered "construction specification sheets" or "construction estimating units." It is often defined or called a standards sheet. We should inspect these construction sheets for they come first in the order of events leading to actual construction. Can we adopt a "construction specification sheet," or a portion thereof, as a retirement unit? Can a retirement unit be adopted by the various personnel in line construction engineering, warehousing, or operations to create a "compatible unit" that can be used throughout all departments? Can the accountant adopt an accounting pro-

cedure that will close to plant accounts these compatible units created from "construction estimating units" or "construction specification sheets" by engineers and reported by the field forces? If so, we have pre-engineering and preaccounting expressed in compatible units—units which may not be exactly the same, but at least are compatible.

Let us look to accounts numbered 354 and 355 in transmission, and number 364 in distribution classified as poles, towers, and fixtures. Some definite compatible units (back to our truck) are:

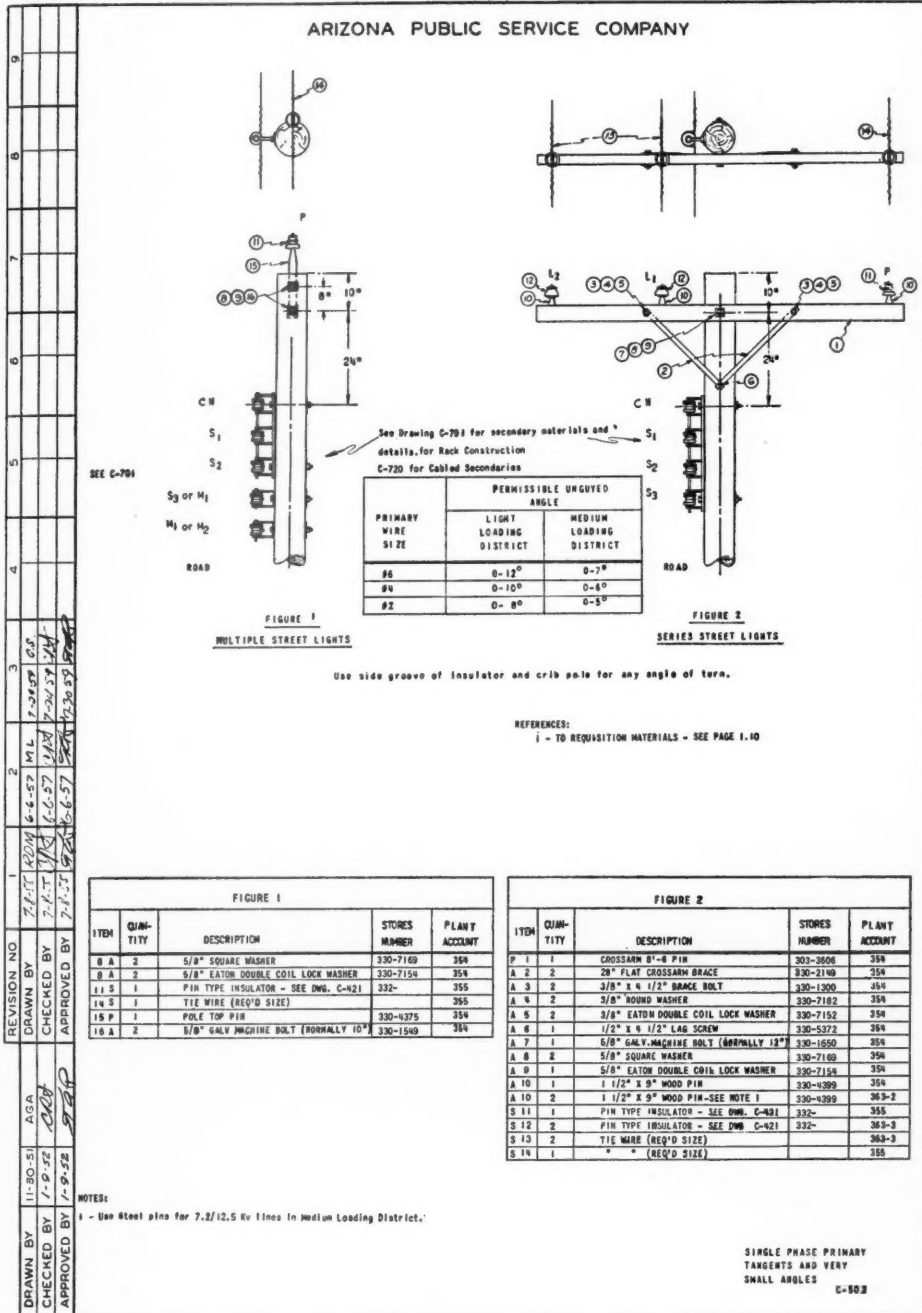
1. Racks complete with insulators
2. Pole
3. Tower
4. Excavation, backfill, and disposal of excess excavated material.

Now let us group the miscellaneous pole hardware and material into some form of recognizable retirement units which, in some cases, may be a "construction estimating unit" or a "construction specification sheet":

1. Down guys and head guys
Includes anchor, wire, insulators, clamps, preformed dead ends, guards, and bolts.
2. Crossarms, single 8-foot and under:
Includes all necessary hardware.
3. Crossarms, double 8-foot and under:
Includes all necessary hardware.
4. Crossarms, single 9-foot to and including 12-foot:
Includes all necessary hardware.
5. Crossarms, double 9-foot to and including 12-foot:
Includes all necessary hardware.

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6. Crossarms, single over 12-foot:
Includes all necessary hardware.
7. Crossarms, double over 12-foot:
Includes all necessary hardware.

SIMILARLY, account 356 in transmission and 365 in distribution "overhead conductors" can be grouped so that retirement units may, in some cases, be the same as "construction estimating units" or "construction specification sheets."

1. Conductors, two continuous spans of one circuit.

This could be subdivided into three or more classifications, but not include dead-end insulators, such as:

- (a) Number 1/0 or smaller or equivalent
- (b) Above 1/0 to include 477 MCM or equivalent
- (c) Above 477 MCM or equivalent

2. Dead-end insulators, one installation.

These units while not complete, suffice for my illustration in the compatibility of a unit to be used by the accountant, engineer, warehouseman, construction man, purchasing agent, and measurements engineer. This is communication within the six groups.

The engineer's construction specification sheets need not be changed materially, for all we need to do is examine each one independently and define the number of compatible retirement units contained therein. Some changes are necessary.

The engineer, of necessity, must be cognizant of these retirement units when preparing a work order to determine the

allocation of charges either to plant accounts or expense.

Do you think we can get the accountants, the engineers, the warehousemen, the construction forces, the purchasing agents, the measurement engineers to give and take a little bit in order to get a common language in terms of a compatible unit? The objective is to improve the communications among these six professions, if you will, and at the same time reduce the cost of construction by producing quickly more data on actual costs.

Do you think we can reduce costs in these areas?

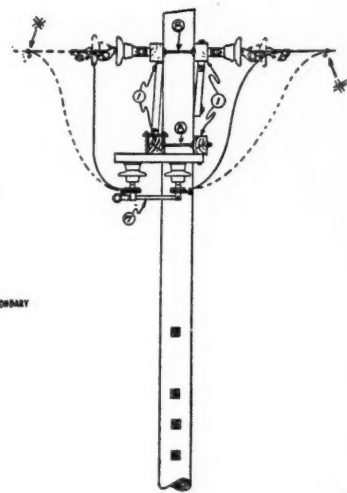
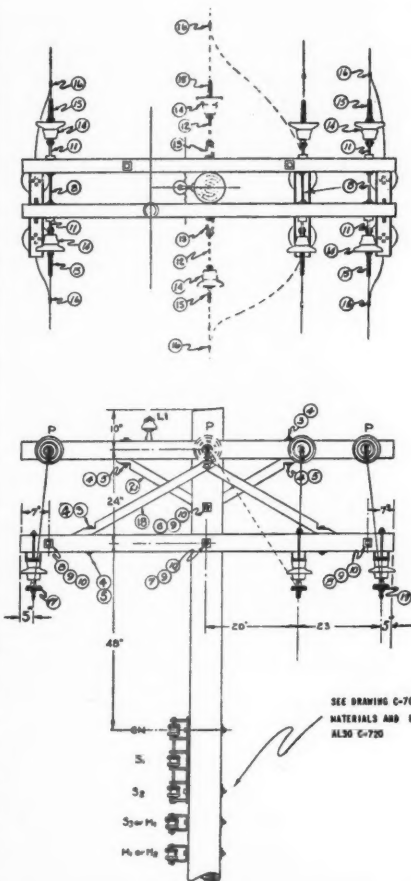
1. IN ENGINEERING: The engineer preparing the work order has only to write down on the work order estimate the construction specification sheet number which may show on its face the estimated cost thereof, and make a total estimate for the job. Or, better still, let electronic data processing compute the cost and print the work order. There is a question if he is to prepare a total cost estimate of the job, of whether he should record direct costs with or without overheads, or, again, is this a more economical function of a computer? There is a question as to the variations of specifications as to size of pole, crossarm, etc. There is a question as to whether such variations should be designated by a prefix or a suffix to the specification sheet number. (To those who went through the early days of plant ledgers in 1938, the problems I have enumerated here are simple.)

2. IN WAREHOUSING: The electronic unityper puts on magnetic tape the construction specification sheet number, the estimated cost, and other pre-engi-

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REVISION NO.	1	2	3	4	5	6	7	8	9
DRAWN BY	AGA	AGA	AGA	AGA	AGA	AGA	AGA	AGA	AGA
CHECKED BY	AGA	AGA	AGA	AGA	AGA	AGA	AGA	AGA	AGA
APPROVED BY	AGA	AGA	AGA	AGA	AGA	AGA	AGA	AGA	AGA
DATE	11-30-51	1-9-52	1-9-52	1-9-52	1-9-52	1-9-52	1-9-52	1-9-52	1-9-52



ITEM	QUANTITY	DESCRIPTION	STORES NUMBERS	PLANT ACCOUNT
1 P	1	8'-6" PIR CROSSARM	303-3606	354
2 P	1	42" RAFTER BRACE	330-2159	354
3 A	4	1/2" X 8" GALV. WASH. BOLT	330-1528	354
4 A	8	1/2" ROUND WASHER	330-7184	354
5 A	4	1/2" EARTH DOUBLE COIL LOCK WASHER	330-7153	354
6 A	2	5/8" GALV. WASH. BOLT (NORMALLY 18")	330-1550	354
7 A	2	5/8" GALV. WASH. BOLT (NORMALLY 18")	330-1552	354
8 A	5	5/8" GALV. D. A. BOLT (NORMALLY 18")	330-1360	354
9 A	22	5/8" WASHER SQUARE	330-7169	354
10 A	8	5/8" EARTH DOUBLE COIL LOCK WASHER	330-7154	354
11 A	6	5/8" LONG BOLT END EYE	330-3352	354
12 P	2	EXTENSION LINK 10"	330-6955	354
13 P	2	CLEVIS	330-2900	354
14 S	4	SUSPENSION INSULATOR-SEE DWG. C-421	332-	355
15 S	6	UNIVERSAL STRAIN CLAMP	330-	355
16 S	6	NOT LINE CLAMP - SEE NOTE 2	330-2510	355
17 S	3	SPST DISC. SWITCH - SEE NOTE 1	330-	355
18 P	1	PAIR 40" WOOD BRACE	330-2161	354

REFERENCES:
1 - TO REQUISITION MATERIALS - SEE PAGE 1.10

NOTES:
1 - DISCONNECT SWITCH AS REQUIRED
2 - USE SERVICE CONNECTORS ON DE-ENERGIZED LINES.

THREE PHASE PRIMARY
DISCONNECTING SWITCHES
C-545

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neering and preaccounting data pertaining to that particular job. The magnetic tape is fed into the electronic data processing machine and there is printed a request on the warehouse, or a materials issues ticket, on which the material is listed in the bin order. In other words, the class and item number is sorted and printed on the high-speed printer in the same sequence as the bins are located in the warehouse. I have learned from companies now so doing that this saves 15 per cent to 25 per cent of the labor costs of filling orders in the warehouse. We also eliminate the necessity of a person taking individual items off of several bills of material and then summarizing so as to prepare a materials issues ticket, and eliminate his mistakes while doing so. This would also eliminate the consequent delays of the crews getting away from the dock in the morning. It is no problem for the computer to subtract the materials issues from the total on hand and at a later date print out a warehouse inventory.

The details of this type of materials and supplies accounting are well known.

3. IN PURCHASING: When the supplies in a bin have reached the minimum ordering point, the purchasing department receives a preprinted purchase order by way of an electronic data processing machine that prints the standard ordering quantity by a high-speed printer, flexowriter, or punch card. As is well known, many companies now use this method. The purchasing department buys the materials to go into the warehouse in accordance with preassembly or prepackaging directly related to the construction specification sheet. I have recently learned

of a telephone company which has started to buy prepackaged materials for the first time. As for example, the vendor will ship the crossarms with braces, pins, and bolts as a package or, if you prefer, pre-assembled.

4. IN CONSTRUCTION: Since we have pre-engineering and preaccounting, the construction forces have only to report the completion of a job to the accounting department. Variations from the original specifications are reported on a change order. I know of at least one company that now processes with electronic equipment the closing of work orders to the predetermined FPC plant account number. There are many others on the drawing board.

5. IN ACCOUNTING: The compatible unit would make possible preaccounting on mass jobs. When field forces report the completion of a job in accordance with the pre-engineering, it is then only necessary to tickle the electronic machine to close the job. Only exceptions need to be reviewed by the plant accountant.

6. IN MEASUREMENTS: The reporting of quantities of work done by the operations and construction forces is an area in which all would like to see great progress. Accountants are interested in knowing what the cost per unit is, but, more important, how can the cost per foreman, as well as to the engineer, in a foreman, as well as to the engineer, in a language which both will understand? The measurement unit must be adapted to fit the nomenclature of the accountant, the engineer, and the other professions.

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THE transition from *engineering estimates* to actual *construction to accounting units* is beset with many inroads of confusion. But, with the merging of the retirement units and engineering construction specification sheets and items into a computer, I think the days of organized chaos are numbered. The computer can electronically sort, identify, and produce any number of desirable operations.

Since engineering "construction specification sheets" define the way the construction forces decorate a pole, doesn't it appear plausible that we continue our "modus operandi," that is:

1. *Engineer* work orders by construction specification sheets.
2. *Assemble* material on a pole by these construction specifications.
3. *Reports* from our field personnel by construction specification sheet number.

To develop a work measurement unit, time standards can be assigned for each construction specification sheet in man-hours or dollars.

Now, let us take the work order engineered by construction specification sheets and recite some detailed, desirable results from electronic data processing. These are not all, as will be quickly recognized.

Within the computer, a construction specification sheet number is identified with an individual list of material by class and item number and warehouse bin order, retirement units with proper FPC plant account number, labor cost, and man-hour standards. Thus, we see

that it is the computer acting as a catalysis that brings about the compatibility of work measurement units, retirement units, accounting units, and construction specification sheets. From this, a computer program can be designed to accomplish the following:

1. Price Work Orders
 - (a) Price Material
 - (b) Price Labor
 - (c) Price Variables by Specific Instructions
 - (d) Price Transportation
 - (e) Price the Property Retired Report
2. Print Property Retired Report per work order.
3. Print Material Issue Report by warehouse bin sequence.
4. Update materials and supplies continuous inventory records.
5. Prepare a request to purchasing department when minimum reorder point is reached.
6. Prepare construction man-hours required for scheduling crews.
7. Prepare budget control reports.
8. Prepare statistical monthly report on completed work orders, comparing estimated against actual cost by crews and divisions, and also an evaluation of the crew's performance.
9. Prepare monthly report of work orders with unacceptable variations from standard for evaluating, estimating, construction methods, material requirements, and obsolescence.
10. Close work order to utility plant by additions and retirements by the compatible retirement units.

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There You Have It!

WE need help to make this proposed system fulfill the prerequisites stated earlier. Let us summarize:

1. The engineer has his construction specification sheets to prepare work orders, and receives a feed-back audit of his work orders.
2. The warehouse, depending upon each company's method, can issue and receive material by construction specification sheet numbers or by single items thereon.
3. Purchasing can procure material from the vendors by construction specification sheet numbers or by single items thereon.
4. Field forces can report installation and removals by construction specification sheet numbers.
5. The accountant has his records for additions and retirements to utility plant.
6. The effectiveness of our crews can be measured by a work measurement unit.

CAN we determine the economic feasibility of this system in co-operation with the electronics people who are well versed in this field? For example, in our company an analysis was made of 99 work orders completed during one month which disclosed the following data:

1. The 99 work orders involved only 27 out of a possible 140 construction specification sheets or 19.28 per cent.
2. The total usage of these 27 construction specification sheets in

various combinations for the 99 work orders amounted to 2,413 construction units (a construction unit = 1 construction specification sheet) or an average of 24.37 construction units per work order. (For clarification, one work order may use one construction specification sheet number for ten construction units, another number for five construction units, another number for six construction units, and another number for four construction units.)

3. Of the 2,413 construction units, 20 construction specification sheets represent 1,801 construction units or 75 per cent.
4. Of the 2,413 construction units, five construction specification sheets represent 1,186 construction units or 49 per cent.

When an average construction specification sheet contains 11 individual items, we can visualize the savings of utilizing a computer to do conversions.

MY belief is that through the judicious application of all of our knowledge and years of experience, we can bring about the compatibility of work measurement units, retirement units, accounting units, and construction specification sheets as a means of measuring the cost of construction. And, we can measure results by units of construction as well as the total cost of a single job. We can evaluate the performance of either the crews or of contractor's crews compared to standards.

Some Answers to the Question of Stock Dividends



This author suggests a plan which would, in effect, give stockholders an option while at the same time complying with Internal Revenue Service regulations. He believes that utilities using such an approach would enjoy very high price-earnings ratios for their common stocks. It would also allow such companies to raise common stock equity funds to finance expansion at substantially lower cost.

By WILLARD F. STANLEY*

THERE are two basic groups of investors in common stocks of public utilities. One group desires maximum dividend income. This group consists principally of the large mass of investors with relatively small income and relatively low federal income tax brackets. The other group is smaller in number, although its per capita investment is much greater. This group comprises primarily wealthy investors with large incomes who are in the relatively high federal income tax brackets and who look principally to price appreciation in their stock and dislike dividend income because they have to give so much of it to the government.

*President, Corporate Services, Inc., Brooklyn, New York.

If a stock can be found which will appeal to both of these groups, it should be attractive, indeed. But there are grave difficulties. The obvious answer would seem to be to give the stockholders a choice as to whether they desire cash or stock dividends. Unfortunately, however, the Internal Revenue Service has long held that any such option to the stockholder makes the stock dividend taxable, which, of course, vitiates the entire benefit of this procedure.

THE desirable thing is to find a plan which, in effect, gives the stockholders such an option, yet where the stock dividends will be treated as nontaxable by the Treasury. It appears that the utilities able to develop such a plan would

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enjoy extremely high price-earnings ratios for their common stocks, which would not only substantially increase market values for the benefit of the stockholders, but also enable the company to raise common stock equity funds to finance expansion at a substantially lower cost.

Before suggesting techniques which might solve this problem, let us first give some further consideration to the two basic groups of investors referred to above. The wealthy investor's desire for price appreciation rather than income is obvious, but why do the mass of holders with smaller incomes, who desire regular quarterly cash income for living expenses or other purposes, dislike stock dividends? If it is the cash they need, why cannot they realize this by selling the stock dividends?

THE principal difficulty here is that in the case of these holders of relatively small quantities of stock, the stock dividend they would regularly receive each quarter would probably work out to only one, two, or three shares, plus a fraction. The problem of the fraction can be eliminated, as the Treasury permits corporations to pay all fractions in cash at market value without this making the full shares of stock dividends taxable.

But the problem lies in disposing of these small segments of one, two, or three shares of stock at a fair price. Even with three shares a quarter, which would indicate a fairly average investment of around \$9,000 or \$10,000 in that particular stock, the average value of the shares might only be around \$100 and the New York Stock Exchange commission is 6 per cent on sales involving \$100 or less.

There is also an extra charge for selling an "odd lot," which is anything less than 100 shares. So these expenses of sale can run up to a sizable percentage of the amount involved where only a few shares are sold.

IN the over-the-counter market the situation is even worse, for there the selling stockholder might have to pay what would amount in effect to a commission of perhaps as high as 10 per cent of the proceeds or even more. Obviously, such considerable diminution of the value of the stock dividend, plus the trouble of having to attend periodically to the sale of the stock, makes equities paying stock dividends generally unpopular with the mass of small holders desiring regular quarterly cash income.

But inconvenience and expense are not all that upset the small stockholders with respect to stock dividends. Stock dividends can also have the disadvantage of adversely affecting market values of the stock, since many small investors will sell their dividend stock when they receive it each quarter. Thus a considerable block of stock goes up for sale around every dividend date, perhaps as much as nearly \$1.5 million in value in the case of a utility of something like average size, with say \$400 million in net assets. A temporary oversupply of the stock is thus created every quarter and the market declines accordingly due to the lack of any orderly means of distributing the dividend shares to new investors. And this decline may be largely permanent since it is known there will be a similar offering every three months. It is hard to say how great the drop in market values from this source may be. They will vary greatly between

SOME ANSWERS TO THE QUESTION OF STOCK DIVIDENDS

companies and some "blue chips" and growth companies might have enough attraction to keep their markets on a comparatively even keel in spite of the dividend offerings. In general, however, the adverse market effect should be sufficient to make the stock dividend policy unattractive.

Now as to ways and means to solve this problem. As expressed above, the problem is not one which is burdening utilities today, but of the sort that, if solved, could create very large additional values for those companies which adopted a successful solution. It might be contended that if more and more companies adopted the solution, their advantage over the others would gradually be reduced. This could prove true, but only after a considerable period, but even if a majority of the utilities adopted such a plan, it would still give the stocks of that industry an advantage over those of industrial and commercial corporations, assuming these had not adopted the successful solution.

I. The Citizens Utilities Plan

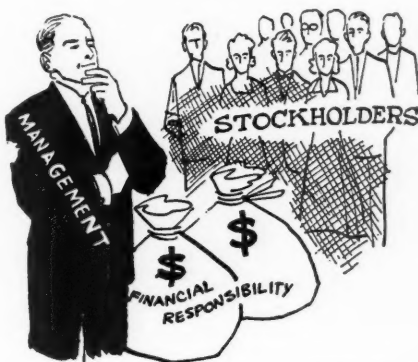
FIRST on the list of solutions is the Citizens Utilities plan. Back in 1950 the writer developed a plan involving two classes of common stock, on one of which only cash dividends would be paid, while the other received dividends entirely in stock. The stocks were to be interconvertible. After long consideration, the Treasury, in the light of the law as it then stood, refused to clear the plan with respect to nontaxability of the stock dividends.

About five years later a similar plan was announced, independently and with-

out knowledge of the earlier one, by Citizens Utilities Company. This time the Treasury approved of the plan, the law having been changed in the meantime, and issued a favorable ruling to the company. But shortly thereafter the Treasury announced a proposed regulation which would make taxable stock dividends issued under such a two-class stock plan. The Treasury, in accordance with usual custom, asked for comments from industry and held a hearing. But a number of years have now passed and the regulation has never been adopted or withdrawn.

By pigeonholing it, the Treasury has deterred other companies from adopting similar plans, and at the same time has avoided a legal test case, there being no regulation to attack, since it is still pending. Meanwhile, the Citizens plan goes on unmolested (so far as known to the writer) and in view of the special favorable ruling which that company received, it seems likely that the new regulation, if adopted, will not affect the Citizens plan, except possibly as to the period after the regulation is promulgated.

Nothing now prevents other utilities from adopting a plan similar to Citizens,



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but there is the possible danger that the Treasury might, soon thereafter, adopt the prohibitory regulation, which would make the new plan abortive. Under these circumstances it seems unlikely that utilities will take the chance of proceeding with such a plan and running the risk of having it promptly invalidated, remote though the latter risk may be.

II. Gearing Dividends to Stock Holdings

ANOTHER possible solution, which has been developed by the writer and which, so far as he knows, has not previously been employed, would be to gear the type of dividend to be paid to each stockholder to the stock holdings of such stockholder, according to the company's stock records.

Since it is logically to be expected that the wealthy holders in high-income tax brackets will wish stock dividends and the greater number of holders with smaller incomes and lower taxes will prefer cash dividends, the company might set some fixed number of shares which would determine whether the dividends paid were to be in cash or stock. Suppose this number of shares were fixed at 300, with a present assumed average price of around \$33 per share. This would indicate a \$10,000 investment as the dividing line, probably not too far from today's average. On this basis, holders of 300 shares or more would receive stock dividends and holders of less shares would get cash dividends. There would be no option to the stockholders, since the kind of dividend would be based on their holdings and not their desires. In order to change the type of dividend received, stockholders would have either to sell or

purchase stock and thus change their investment position in the company.

SUPPOSE such a plan were adopted, would the wealthy stockholders, who would receive nontaxable stock dividends under it, be likely to bid up the market value of the stock, thus benefiting both the company and its stockholders? As evidence of the value to the wealthy investors of getting nontaxable dividends in stock (while the stock continues to be attractive to the smaller holders because they get cash dividends, as before) let us consider the case of Citizens Utilities.

According to market values at February 20, 1961, Citizens Utilities common stock was selling at 28.8 times its latest disclosed annual earnings applicable to the common stock. Average price-earnings ratio for the 35 electric utility companies with operating revenues of less than \$25 million annually (being the group of companies in which Citizens is comprised), as of the same date was 19.7. Average for the 115 electric utilities included in the total tabulation was a bit over 20 times. Thus we find Citizens selling at a price-earnings ratio 44 per cent higher than the average for the electric utility industry. In addition, Citizens ranked sixth in price-earnings ratio among these entire 115 companies, only the three growth Florida situations (Florida Power, Florida Power & Light, and Tampa Electric) plus Gulf States Utilities and Houston Lighting & Power being superior in this respect. Yet in size (based on annual gross revenues) Citizens ranks only 102nd among the total of 115 companies. Furthermore, its properties are relatively small and scattered and comprise a number of different utility

SOME ANSWERS TO THE QUESTION OF STOCK DIVIDENDS



services. The foregoing seems clearly to demonstrate that the two-class common stock plan must be considered a potent factor in producing the extraordinarily high price-earnings ratio which this situation enjoys.

THE writer believes that the proposed gearing of dividends to stock holdings should be feasible without making the stock dividends taxable. The present "overhanging" proposed regulation of the Treasury regarding two-class common stock plans should not apply, even if adopted, to a plan providing for types of dividends geared to stock holdings.

It might be preferable to leave the number of shares to form the dividing line between cash and stock dividends flexible by providing, in the charter amendment which would create the new type of dual dividend stock, that the number of shares determining the kind of dividend should be fixed annually by the board of directors and would apply to four quarterly dividend payments. This would avoid the necessity for changing the charter again if the price of the stock

were to be changed radically, either upward or downward. A two-for-one split, for instance, would make it necessary to double the number of shares of holdings which would receive stock dividends; otherwise, such dividends would become payable to a large number of stockholders with relatively small investments (perhaps as low as \$5,000) who, presumably, would not desire this type of distribution.

III. Making Dividends Paid Solely in Stock Attractive to Smaller Stockholders

IF the dual approach of paying cash and stock dividends, respectively, to different groups, classes, or holdings of stock should prove not to be feasible, there is another solution for the stock dividend problem which might work.

The objection of the mass of smaller utility stockholders to receiving regular stock dividends stems from three causes: (1) the trouble incident to disposing of the stock in order to get cash for income; (2) the substantial percentage discount which the smaller stockholder must take in disposing of a few "dividend" shares in the market; and (3) the recurring

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"overhanging" adverse effect on the market for the stock due to the knowledge that every three months there will be a considerable supply of stock for sale from the smaller holders who wish to dispose of their stock dividends. If these objections could be met, a policy of paying dividends solely in stock might become acceptable to the mass of smaller stockholders, besides being popular with the larger holders.

THE solution of this problem might lie in forming a purchasing and selling syndicate, consisting of the underwriters and investment dealers principally dealing in the company's stock. This syndicate would, at the time each quarter's stock dividend was paid, offer to buy the dividend stock from the stockholders at a price equal to the then market price for 100 share round lots. It is assumed that perhaps 50 per cent or more of the dividend shares would be sold under such an offer.

The syndicate would then distribute the dividend stock to new investors in an orderly manner. Instead of the unwanted dividend stock drifting haphazardly into the market to be absorbed as best it can, the stock would be sold without adverse impact on the market through the usual channels of common stock distribution. This would eliminate the element of "overhang" every quarter which presently arises as the smaller holders dispose of the stock they receive as dividends and would largely solve the problem of excessive discount from the regular price in selling the dividend shares by assuring the stockholders disposing of their stock of receiving the regular round lot 100 share price, less a reasonable commission,

even though the shares sold were only one, two, or three in number.

AS to the factor of trouble to the stockholders in disposing of the shares, this, too, could be covered under the proposed plan by permitting the stockholders to sign, and file with the company, authority, good until canceled, to automatically sell any dividend shares to which they might be entitled by accepting the offers made each quarter by the syndicate. This syndicate would be properly identified in the order to the company. In this way, as long as a stockholder desired to sell his dividend stock through the syndicate, no action on his part would be necessary and all trouble incident to the disposition of the stock would be eliminated. The stockholder would simply receive a check from the syndicate for the value of his dividend shares (less commission) instead of receiving a check from the company for a like amount if a cash dividend had been paid.

The \$1.5 million of stock which it might be assumed would be offered for sale in the case of an average utility (\$400 million net assets) should be sufficient to interest the underwriters and dealers in forming the syndicate and should make the distribution of the shares profitable to them.

HOWEVER, it is believed that the company could, if desired, without affecting the nontaxability of the stock dividends, contribute toward the expense of carrying out the plan by payments to the syndicate in connection therewith. This would be designed to keep the expenses of the sale of stock down to the bone and still make the transaction worth

SOME ANSWERS TO THE QUESTION OF STOCK DIVIDENDS

while from the syndicate standpoint. The selling commission might thus be reduced to a small one with a net return to the stockholders high enough to make the plan acceptable to them.

Since by paying stock dividends the company would in effect be substituting the cash dividends not paid for cash from the sale of common stock if cash dividends were paid, it is justified in contributing to the syndicate operation since this takes the place of, and would work out to much less than, the expense to the company of distributing common stock either through sale to the public through underwriters or to the stockholders through subscription rights, with the unsubscribed balance underwritten.

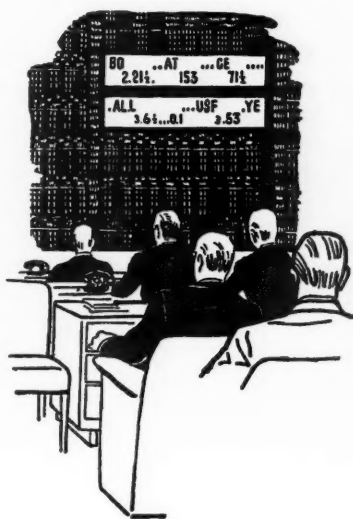
Summary

OF course the success of any of these proposed solutions of the stock dividend problem is dependent upon one other very important factor; *i.e.*, the extent to which such a program would unduly dilute the per share earnings on the common stock. This would occur if the company raised more money than it needed through substituting stock dividends for cash dividends, and would have to invest the excess funds at a comparatively low rate of return. The question would be whether the amount the company would retain by means of the stock dividend payments would be greater than the amount the company needs to finance expansion and maintain a proper common stock equity ratio in its capitalization.

Obviously, therefore, the stock dividend device will appeal most to, and operate most effectively in the case of, companies which are expanding rapidly and continuously and which, accordingly, need

to raise substantial amounts of common stock equity at frequent intervals. The success of any stock dividend plan, therefore, requires its consideration in the light of the particular circumstances surrounding the company involved.

ONE thing that seems reasonably assured at present is that a policy of stock dividends without some solution of the problems described above, either by one of the above suggested procedures or otherwise, does not seem likely to result to the benefit of the company or its shareholders. A tabulation of electric utilities made not very long ago showed only 12 out of 115 operating companies paying dividends in stock. This excluded Citizens Utilities, whose two-class stock plan is not comparable. These 12 stocks then had a 16.3 average price-earnings ratio. The weighted average price-earnings ratio for all 115 stocks was at that time 17.1, or about 5 per cent higher. Eight of the 12



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companies had price-earnings ratios below their group averages, one was even and only three were higher.

Admittedly, many factors other than dividend policy enter into price-earnings ratios. But when eight of the 12 electric utilities paying stock dividends are found to have price-earnings ratios below those for their groups and also below the entire industry, there would seem to be an element of cause and effect.

Stock dividend programs, calling for payment of either all or a part of the annual distribution of earnings in stock, do not appear, therefore, by present evidence to be popular with the investing

public. Under present tax laws they seem to represent more of a liability than an asset.

THE problem, as faced today, therefore, seems to call for some drastic solution, if the companies and their shareholders are to benefit from a stock dividend program. There seems little doubt that if a satisfactory solution can be developed and applied to an expanding situation where the new policy will not involve undue dilution of per share earnings, a substantial gain can be registered both for the stockholders in terms of higher market prices, and for the company itself, in getting higher prices when it issues common stock.

Why Taxes Increase

IBN KHALDUN, 600 years ago in his classic "Prolegomena to Universal History," pointed out how tax increases grow with the spread of luxurious habits of the government:

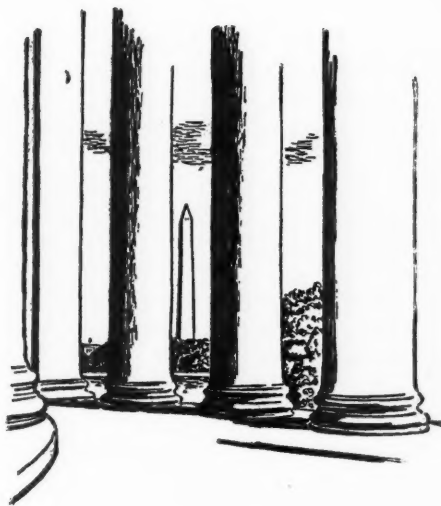
"People get accustomed to this high level of taxation, because the increases have come about gradually, without anyone's being aware of who exactly it was who raised the rates of the old taxes or imposed the new ones.

"But the effects on business of this rise in taxation make themselves felt. For businessmen are soon discouraged by the comparison of their profits with the burden of their taxes, and between their output and their net profits. Consequently production falls off, and with it the yield of taxation.

"The rulers may, mistakenly, try to remedy this decrease in the yield of taxation by raising the rate of the taxes; hence taxes and imposts reach a level which leaves no profits to businessmen, owing to high costs of production, heavy burden of taxation, and inadequate net profits. This process of higher tax rates and lower yields (caused by the government's belief that higher rates result in higher returns) may go on until production begins to decline owing to the despair of businessmen."

—EXCERPT from First National City Bank Monthly Letter.

Washington and the Utilities



Senate Group Would Reform Regulation

SENATE Republican Leader Everett M. Dirksen of Illinois rejected two Democratic proposals which would give President Kennedy greater policing powers over quasi-judicial federal regulatory agencies. The proposals were made by the Senate Subcommittee on Administrative Practice and Procedure and revealed by Chairman John A. Carroll (Democrat, Colorado) last month. They would affect such independent agencies as the Federal Trade and Federal Power commissions. Carroll and Senator Philip A. Hart (Democrat, Michigan), Democrats on the three-man subcommittee, recommended that Congress ratify a presidential code of ethics for the agencies and impose penalties against commission members who fail to reveal "backdoor" contacts by favor seekers.

Dirksen, in his minority views, rejected this. He said Kennedy already had such power. He also claimed that forcing commission members to reveal secret conferences or communications would not solve the problem of influence peddling. He did

not, however, make any proposals of his own. "The charges against the administrative system dealing with the honesty and integrity of the many men and women who operate it," Dirksen said, "and their susceptibility to influence are not supported by the record. While the administration system must provide protection from the transgressions of the few, this problem should not influence the basic structure of the system."

DIRKSEN also voiced opposition to creation of a White House Office of Administration and Reorganization as proposed by Carroll and Hart—an office which Carroll denied would have czarlike powers. In this respect, Dirksen also clashed with James M. Landis who, in a special report to Kennedy, proposed a regulatory agency czar in the White House. Landis made a study for the President aimed at revamping agency procedures.

Carroll and Hart insisted their proposal did not envision a czar. But Dirksen said he did not want any White House office because it might give the President power

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over agency decisions. Dirksen did recommend that the President be given authority to review agency policy and ask Congress to change it "if it does not meet the needs of the people."

The three Senators agreed on several recommendations, including one which would assign policy making to agency heads and free them from having to make decisions in individual cases. These last would be handled by subordinates. They also agreed that the terms of commission or board members should be increased uniformly. The Democrats proposed ten years and Dirksen fifteen years. All three Senators recommended quicker review of agency decisions by the courts. Some cases have been pending in the agencies or courts for years.

THE Carroll group will propose a law to provide "civil and criminal penalties for commissioners" engaging in off-the-record contacts. He said it would give officials an easy excuse to put off high-pressure friends seeking favors. Carroll said the proposed White House Office of Administration and Reorganization would help Congress oversee the work of the agencies.

Other recommendations made by the subcommittee include: (1) uniform ten-year terms for all regulatory agency commissioners; (2) increased authority and salaries for hearing examiners, giving commissioners more time for policy making; (3) making the Eisenhower-inaugurated Conference on Administrative Procedure a continuing body; (4) opposition to a general revision of the Administrative Procedure Act; (5) protecting the public from costly rate increases by speeding up cases and not permitting companies to pile one increase on another, as is sometimes the case in the FPC; and (6) speeding up court review of agency cases.

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REPUBLICANS are charging the White House with improper efforts at influence, and demand that President Kennedy withdraw his request for monthly reports from independent regulatory agencies on their policy and administrative actions. House and Senate Republican leaders said in a joint statement that the presidential request was in "direct violation of the spirit and letter of the laws by which these bodies were created." They said the agencies historically have been "answerable to the Congress only." House Republican Leader Charles Halleck (Indiana) told a news conference the presidential move "means very clearly that the President and people in the executive branch hope to participate in decisions" of the agencies. He said this has "caused great concern" in both parties in Congress.

Another measure which Carroll proposes to introduce would bar utilities from increasing rates before regulatory commissions have approved them. It is obviously aimed at gas rate increase applications by pipelines and producers before the FPC. Under existing law such increases may be suspended after thirty days for a period of five months and then go into effect automatically, subject to refund with interest. Similar measures already have been approved by the National Association of Railroad and Utilities Commissioners and have been introduced in the lower house. The subcommittee charged that many companies apply for and temporarily put into effect increases as much as 50 per cent larger than they can reasonably expect to get, but take advantage of the log jam before the FPC to collect the higher rates before the commission can get around to doing anything about them.

THREE House Democrats have announced that they will introduce bills

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which would exempt 97 per cent of the independent natural gas producers from regulation by the FPC. The bills' sponsors will be Representatives Moss (California), Dingell (Michigan), and Macdonald (Massachusetts). It was expected that the proposals would be introduced as soon as Congress returned from its Easter recess on April 10th. Similar bills have been introduced in the past.

SNAKE RIVER HEARINGS END

A FEDERAL POWER COMMISSION hearing at Portland, Oregon, into fish passage facilities proposed by rival applicants for a license to build a high dam in the Middle Snake river came to an end on March 28th. The hearing was scheduled to be resumed April 24th at Washington, D. C.

The taking of testimony began last November 4th at Washington after the applications of Pacific Northwest Power Company for a license to construct the High Mountain Sheep dam, and that of Washington Public Power Supply System for Nez Perce dam had been consolidated into a single hearing.

The April 24th date for resumption represented a two-week continuance granted by Presiding Examiner William C. Levy on motion by counsel for PNP. Counsel for WPPSS also has filed a motion with the FPC for a continuance to June 12th, which Pacific Northwest Power will oppose.

THE Washington and Oregon State Grange organizations support the application for an FPC license for Nez Perce dam "in the absence of a recommendation for federal development," a Grange spokesman told the FPC hearing in Portland. If the opportunity for federal development occurs at a multiple-purpose

or run-of-the-river dam the granges would favor that, A. Lars Nelson, St. John, Washington, master of the Washington State Grange, said.

The granges, for the past thirty years, have invariably opposed development of major sources of electric energy by private utilities, Nelson testified at the concluding session of the hearing, which for twelve days had probed plans for fish passage facilities at the proposed Nez Perce and High Mountain Sheep dams in the Snake river. Nelson testified in behalf of the Grange organizations of both states. He was the only witness among the intervener groups in the hearing to urge construction of Nez Perce over Mountain Sheep. Others either opposed a license for either dam or supported Mountain Sheep on the argument it would do less harm to fish runs than Nez Perce, which would block the Salmon river as well as the Snake.

THOMAS F. SANDOZ, president of the Columbia River Packers Association, in concluding his testimony, continued his recital of declining runs of salmon in the Columbia river system since the big dams began to halt and impede their progress. His figures were challenged by Joseph Sharlitt, WPPSS counsel. Sandoz asserted the best yardstick on salmon runs in the Columbia river is the pack of the commercial canners over a long period of years.

Jonel C. Hill, public utilities commissioner for Oregon, was scheduled to be cross-examined on direct testimony he had presented earlier which related that Governor Hatfield and the responsible state agencies favor the licensing of Mountain Sheep.

Secretary of Interior Udall has gone along with a policy of delay whereby the FPC could not license the private company, until support in Congress can be

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built up for assistance to a government project as yet not launched. The Nez Perce application by the Washington government ownership group is not regarded as likely to prevail because of financial problems, but it could be used for delay. Udall already has informed FPC Chairman Kuykendall by letter that he thinks the FPC should suspend hearings on these rival applications until December, 1964, when he expects an Interior "crash program" will come up with an answer to the fish problem. Udall had stopped expert fishery witnesses of Interior's Fish and Wildlife Service from appearing at the Portland hearings—an order which may result in withdrawal of their direct testimony already given in Washington, D. C. This would leave a hole in the case of the conservation interests.

Capital Airlines Merged

THE largest merger transaction in U. S. commercial aviation history has been approved by the Civil Aeronautics Board. Merger talks began between United and Capital Airlines about a year ago when it became apparent that Capital was headed for bankruptcy. Part of the trouble was a sum of some \$33.8 million owed to a British aircraft company for the purchase of prop-jet Viscounts. According to the merger proposal, United will return 15 Viscounts to the British company as partial payment on the debt. An additional \$29 million will be paid in cash or stock. The decision joins Capital's 7,500-mile system to United's 14,000-mile routes.

The CAB announced that it granted approval of the merger "because it has no practical alternative" in the matter. The board concluded that Capital could not survive if the merger were disap-

proved and stated that "the plain truth is that this board will not sit idly by and allow our fifth largest domestic trunk-line route system to run the risk of disintegration while possible but highly uncertain remedies are being explored." The CAB feels that the "public interest" in preventing the collapse of Capital "outweighs whatever disadvantages may inhere in the merger."

Capital's stockholders will receive one share of United common stock and a five-year option to buy $1\frac{1}{2}$ shares of United at \$40 per share for every seven shares of Capital stock being held. It is anticipated that the majority of Capital's nearly 8,000 employees will be absorbed by United. Another thirty days would elapse before the CAB's decision would become final, but the waiting period was expected to be a formality.

Portable Nuclear Plant

THE first portable nuclear power plant has achieved a self-sustaining fission reaction. The unit, designed for use in remote military bases, is being tested at the National Reactor Testing Station near Idaho Falls, Idaho. It is expected that in the next several months generators capable of producing 300 to 500 kilowatts of electrical energy will be coupled with the reactor unit. Gas, heated in the reactor's core, will be used to drive a turbine. The unit is of the closed cycle type and the gas will then be returned to the reactor to be reheated.

The plant is designed to be transported by aircraft, truck trailer, train, or barge, and it is expected that full power could be achieved only twelve hours after arrival at a given base. Total weight of the six packages which comprise the unit is less than 38 tons.

Telephone and Telegraph



FCC Seeks Satellite Views

THE conflict of jurisdictions continues to plague the proposed satellite communications system. On the one hand, the Justice Department has raised the question as to whether a single network could lawfully be authorized in view of the anti-trust and monopoly laws. The Federal Communications Commission, however, has suggested that space communications will progress faster if the various interested parties get together on the proposition.

At the moment, American Telephone and Telegraph Company, Radio Corporation of America, General Electric Company, and the International Telephone & Telegraph Corporation have all exhibited interest in the satellite project.

The FCC has ordered a formal inquiry into the problems of regulating space communications systems and interested parties have been invited to file their comments by May 1st. The commission has pointed out that, for technical and economic reasons, only one integrated satellite system, or a limited number of systems, seems feasible within the near future. Then the question arises, the commission noted, as to how "this will be consistent with the maintenance of competition in international communications."

THUS, the FCC's purpose in the inquiry will be to "ascertain the various methods by which participation in such system or systems by all interested present and future international communication common carriers and others can best be effectuated on an equitable, non-discriminatory, and lawful basis." The specific questions asked in the inquiry were the following:

(1) Assuming the authorization of a single or limited number of satellite communications systems will best serve the public interest, what plan of participation is best designed to provide equitable access to, and nondiscriminatory use of, satellite communication facilities, by existing and future international communication common carriers and others? Should such a plan include participation of manufacturers of satellite communication and launching equipment? Specify in detail the features of the plan, including the financial and operational arrangements related to the ownership and use of the system.

(2) Specify in detail, with supporting briefs, how such plan would comply with existing laws and policies (particular attention being given to

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§§ 313 and 314 of the Communications Act and pertinent antitrust statutes).

(3) Specify in detail, with supporting briefs, the provisions of the Communications Act and commission rules and policies which are relied upon as authority for the commission to prescribe such plan to the exclusion of other plans and to require licenses or other authorizations to be obtained thereunder; or, in the absence of such authority, specify in detail the changes recommended in the laws and policies in order to implement such plan.

(4) Specify in detail the extent to which each of the various parties involved in the systems covered by such plan would be subject to regulation by this commission as common carriers or otherwise.

(5) State whether you intend to participate in such plan and the nature and extent of such participation.

IN view of the widespread interest in this subject the commission requested that 40 copies of each such response be filed.

In its notice of inquiry the commission stated:

It is the expressed policy of the United States that activities in space should be devoted to peaceful purposes for the benefit of all mankind. The earliest possible realization of a commercially operable point-to-point space satellite communication system represents one of the most significant, practical, and beneficial means of implementing this vital national policy. The commission, in furtherance of its statutory responsibilities and in an effort to facilitate the advancement of the nation's vital space policy, has been engaged for some time in an attempt to assess the nature of the many varied

and complex problems associated with international communications via space satellites. Present studies indicate the possible arising of conditions and circumstances which appear likely to present certain problems with respect to the authorization and operation of satellite systems for communication services between the United States and foreign points. These problems require an assessment of the commission's administrative and regulatory functions and authority with respect thereto.

ONE of the associated problems of the proposed satellite system is the limitation of the radio spectrum itself. This limitation is international in scope since all the nations of the world will have to use the radio space available. Thus, in the long run it may develop that a number of U. S. companies will co-operate in establishing a satellite system and if more than one or two are put in orbit the chances are that additional networks might be the product of some other nation.

David Sarnoff, chairman of the Radio Corporation of America, stated recently that the world is on the threshold of world-wide television through the use of satellite relay transmitters. Mr. Sarnoff advocates the establishment of a "channel for freedom" over which the United States might broadcast its proceedings anywhere in the world without censorship.

He has forecast that within ten years "an audience of a billion persons might then be watching the same program at the same time with simultaneous translation techniques making it understandable to all."

Pointing the way to international cooperation on this project, the United States, Great Britain, and France have agreed to work together in the testing of

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the U. S. satellites. Both Britain and France will provide one ground station each with highly accurate tracking and antenna-pointing devices. The two foreign stations will transmit telephone, telegraph, and TV signals which will be relayed or reflected from the U. S. satellites. The three nations have indicated that other countries are welcome to take part in the project if they wish to provide additional stations.

No matter how the various questions may be resolved between the various government agencies and foreign powers, one thing seems certain—communications—telegraph, radio, telephone, and TV—will change in the next few years from essentially national services to international projects. Within not too many years cultural programs, as well as news programs, may be beamed halfway around the world. One is tempted to wonder if we are also in for international TV commercials, and, if so, what type of regulation may be imposed. The launching of a satellite itself is a vastly complex matter and the regulation of the system itself can be expected to be equally complicated.

FCC Authority in Radio-TV Matters Questioned

JOSEPH M. NELSON, chief of the FCC's broadcast division renewal branch, has stated that the commission lacks authority to enforce its requests for "fair and impartial treatment" on controversial radio and TV matters. Mr. Nelson gave this opinion before a Senate Commerce subcommittee which has been looking into complaints that some political candidates

received favored treatment during the 1960 political campaign.

It will be recalled that the "equal time" provisions of the Communications Act were suspended during the past campaign so that radio and TV stations did not have to grant equal time to splinter parties.

Mr. Nelson attributed delays in handling complaints to a shortage of attorneys and a lack of authority to issue cease-and-desist orders. Subcommittee Chairman Yarborough (Democrat, Texas) has recommended that the commission draft legislation which would permit prompt action on such complaints.

Toll Agreements Reached

THE United States Independent Telephone Association has recently announced that an agreement has been reached with the Bell system that will provide an interim annual increase of approximately \$10 million in message toll settlements based on 1960 traffic volumes. This figure assumed that all companies were utilizing average schedules. A number of independent telephone companies, however, are settling on other bases and it is estimated that the adjustment will provide an increase of approximately \$7 million overall for companies using the 1959 average cents-per-message schedule.

The USITA and the Bell system will conduct a nation-wide study of the cost of line haul and automatic ticketing. During this time the interim increases will be applicable.

At the completion of the study, the average schedules will be adjusted to conform to the findings of the two groups.



Financial News and Comment

By OWEN ELY

Gas Utilities Push Air Conditioning

THE charts on page 615 show the remarkable record of the gas utility industry in increasing the residential use of gas. Some 830,000 new residential customers a year were added during the past decade for a total increase of 37 per cent since 1950. Annual home use of gas has climbed to nearly 33 billion therms *versus* less than 14 million ten years earlier, as the result of a steadily increasing demand for gas house heating and modern gas appliances.

Nearly 110 million gas appliances now are in daily service in homes throughout the United States. The nation's 40 million gas-using families—31 million served by utility companies and the remainder by LP "bottled" gas—average nearly three appliances each. The latest important appliance, now being intensively developed, is the gas air-conditioning unit. An AGA survey shows that new gas air conditioning installed in 1960 totaled 141,000 tons—double the amount in 1958. The figures are based on responses from 208 gas utilities in 41 states and the District of Columbia. The biggest installation of 1960 was a 7,500-ton project for Western Electric Company in Lee's Summit, Missouri. Other major installations

include: the Humble building, Houston, 5,000 tons; University of Texas, Austin, 4,000 tons; Texas Instruments, Dallas, 3,000 tons; Minnesota Mining & Manufacturing Co., Maplewood, Minnesota, 2,350 tons; Denver Hilton Hotel, 1,789 tons; Bethlehem Steel, Bethlehem, Pennsylvania, 1,760 tons; Illinois Agricultural Association, Bloomington, Illinois, 1,300 tons; and Abbott Laboratories, North Chicago, Illinois, 1,150 tons. The increased variety of gas air-conditioning

DEPARTMENT INDEX

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models on the market was considered a major factor in promoting 1960 sales.

Decline in Price of Southern California Edison Reflects Regulatory Uncertainties

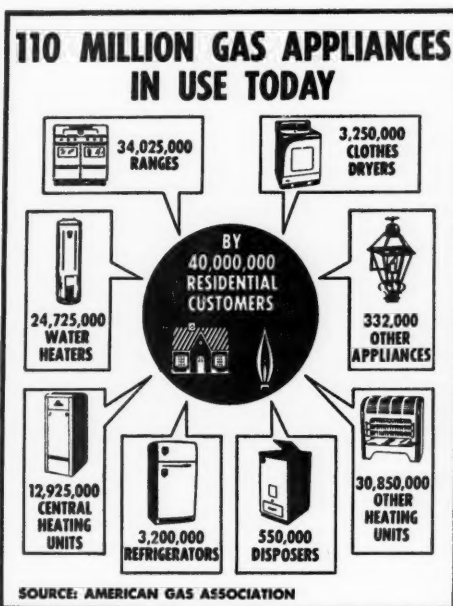
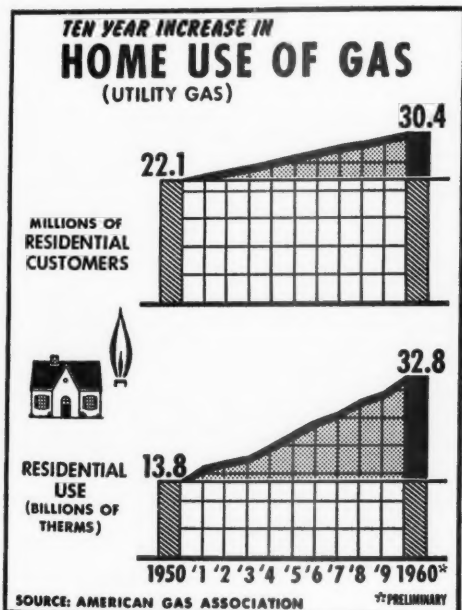
IN the April 13th issue of the **FORT-NIGHTLY**, pages 544 and 545, the recent order of the California commission regarding deferred taxes was summarized. In that decision two of the commissioners, Messrs. McKeage and Mitchell, both of whom had joined in the original order of April 12, 1960, dissented on the grounds that the new order would:

(a) Discourage utilities from adopting liberalized depreciation.

(b) Cause utilities which have adopted liberalized depreciation to abandon it.

(c) Cause confusion and misunderstanding in the minds of utilities and the public.

AT least one financial service, Standard & Poor's, considers the commission's order unfavorable. *The Outlook* for April 10th states that the company is now reconsidering the advisability of using liberalized depreciation in its 1960 tax return; if it decides not to use it, this will have the effect of reducing 1960 earnings from \$4.59 to \$4.01, or a decrease of 13 per cent. Moreover, such a change in accounting would also have the effect of increasing by an estimated \$15 million the funds that would have to be raised by the sale of securities to cover the company's cash requirements for construction in 1961-62. The service states: "In view of this uncertainty with respect to depreciation and taxes, new buying in the



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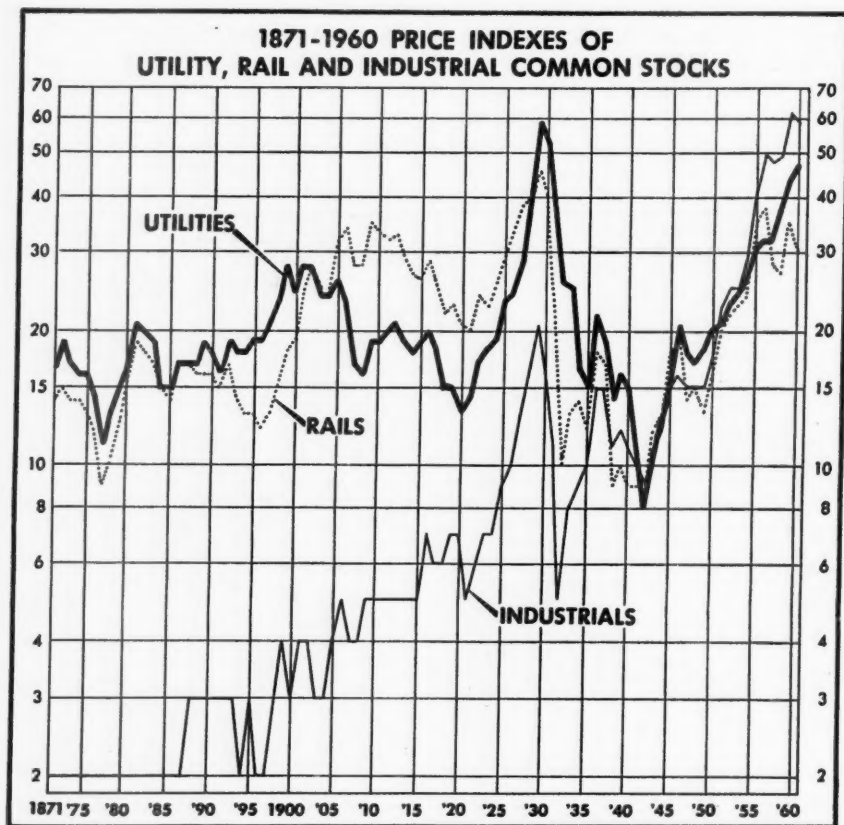
stock should be deferred for the time being."

WHILE utility stocks in general have advanced moderately since March 21st, Southern California Edison on April 10th closed at 69½, a decline of 9 per cent from the March 21st price of 76½. This means that equity financing done at today's price would cost 10 per cent more than would have been the case on the day the order was issued.

As of December 31, 1960, the book value of the common stock of Southern California Edison approximated \$45 a share, excluding from equity the deferred

taxes which the commission has ordered taken out of the rate base (by including them in the depreciation reserve). The revised earnings of \$4.01 would be equal to only 8.9 per cent on this reduced book value. While up-to-date figures for all class A and B electric utilities for 1959 and 1960 are not yet available, the average U. S. common stock return for 1958 worked out at about 10.5 per cent, or some 18 per cent above the California figure. Earnings in California seem well below average, based on common stock ratios.

Both California and Florida are "rapid growth" states so far as population



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and industry are concerned. But the dissimilarity of regulation in the two states makes a vast difference in the attitude of investors. Leading Florida stocks sell at nearly twice as many "times earnings" as Southern California Edison, even after adjusting the latter to the reduced earnings of \$4.01. Florida utilities can do current equity financing at only about half the cost for some California companies, thus saving money for consumers in future. Overly severe regulation seems apt to defeat its own ends. Incidentally, it may be noted that the average 1960 residential cost of electricity per kilowatt was less for customers of Florida Power & Light than for those of Southern California Edison—2.55 cents *versus* 2.94 cents.

Long-term Record of Rail and Utility Stocks Less Impressive Than Industrials'

THE chart on page 616 shows the ninety-year ranges of price indexes for utility, rail, and industrial stocks. From 1918 to date these monthly indexes have been compiled by Standard & Poor's, while in earlier years they were based on the Cowles Commission Stock Price Indexes. (The latter are an extension of the Standard & Poor's indexes, the same method of construction being used and, as far as possible, the same companies.)

The period 1895-1910 was obviously a time of market prosperity for the rails, while the utilities suffered more from the 1907 panic. All three groups shared about equally in the 1920-29 stock market binge, though rails lagged somewhat. Industrials showed a much better recovery during the 1930's than rails and utilities—the former suffered from bankruptcies and the latter from the breakup of the holding companies by the SEC. Strange-

ly enough, all three indexes wound up at nearly the same spot in 1942 and kept close company in the postwar recovery up to 1954. However, in 1960 the industrial index averaged 59, the utility 47, and the rails only 30.

The lesson seems fairly obvious—the *nonregulated* industrials seem to have a long-term advantage over the *regulated* rails and utilities.

March Utility Financing Small

ELECTRIC and gas utility financing in March was extremely small, hence our usual table will be combined with the April report. Three bond issues were sold in a range of 4.36 to 4.50 per cent, and two preferred stock issues at yields of 4.82 to 5 per cent. In the equity list there was only one small sale, amounting to less than \$1 million. The bond issues were all well received and also one of the preferred issues, but Alabama Power preferred seemed priced a little too high on a 4.82 per cent basis; a week after the offering date, about half the issue had been sold.

Administration to Build 700,000-kilowatt Atomic Power Plant at Hanford

THE larger atomic energy plants have been (or are being) constructed on a partnership basis, with private utilities doing the construction work while the government has provided substantial amounts for research and development and supervised the use of U-235 as fuel. Now, however, the Kennedy administration—as in other sectors of the power industry—is putting the federal government into the picture in a bigger way. It was recently announced at Washington

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that the administration will build the world's largest atomic power plant by converting a plutonium-producing reactor at Hanford, Washington, to generate 700,000 kilowatts of electricity.

This plant would generate more electricity than Bonneville. However, it would represent only about 6 per cent of the total amount of capacity in the five states of Washington, Oregon, Montana, Idaho, and Wyoming. Of the total power in that area about 94 per cent is hydro, a portion of which (from the Snake river) is dependable year-round power while other portions (principally from the Columbia river) vary with weather conditions. The future power supply from Hanford will roughly equal the present amount of steam-generating capacity in the area, and being on a year-round dependable basis would help to "firm up" the variable hydro supply.

THE electricity from the Hanford reactor, which might become available in about four years (the reactor itself is scheduled for completion late in 1962), would be sold "at conventional rates" to the Bonneville Power Administration, according to *The New York Times*. This would evidently mean that the government would subsidize any cost of atomic power in excess of present hydro or steam rates, or perhaps absorb it by accounting methods.

The addition of this new power supply, together with the anticipated increase in

the power potential of the Columbia river which will result from the building of new dams in British Columbia (a program now being developed in connection with the recent signing of the international agreement between Canada and the U. S.), may affect the future expansion plans of the utilities in this area. Moreover, it looks as though the Pacific Northwest Power Company may have difficulties with its High Mountain Sheep hydro project—the administration will doubtless favor public power development in the area.

Fuel Cell in Limelight

THE *Wall Street Daily* (a new publication) in its April 11th issue had a startling headline, "Fuel Cell Will Short-circuit Utility Industry Growth." However, the story does not seem to contain much new material. It lists some 14 industrial companies which are working on different types of cells, or various kinds of chemical fuels to be used in the cell. It points out that the fuel cell has 80 per cent efficiency compared with 40 per cent for the standard steam-generating plant. It is suggested that the aluminum industry (where electric power represents 40 per cent of the cost of the product) might be especially interested in the cell. Other industries with large power requirements, which have had to locate near a source of power, by using the cell might be able to relocate near



RECENT UTILITY BROCHURES BY WALL STREET FIRMS*

Company Analyses	Firm	No. of Pages	Month Issued
American & Foreign Power	Hallgarten & Co.	6	Dec.
American & Foreign Power	Pershing & Co.	—	Mar.
American Electric Power	Van Alstyne, Noel & Co.	—	Feb.
American Tel. & Tel.	Shields & Co.	2	Mar.
Arkansas-Louisiana Gas	Hirsch & Co.	—	Feb.

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Bell Telephone of Canada	Matthews & Co. (Toronto)	—	Mar.
Bell Telephone of Canada	D. H. Blair & Co.	3	April
Central Maine Power	Hooker & Fay, Inc.	2	Feb.
Cincinnati & Suburban Bell Telephone	Westheimer & Co. (Cincinnati)	—	Feb.
Columbus & Southern Ohio Elec.	Goodbody & Co.	2	Mar.
Electric Bond & Share	Hallgarten & Co.	6	Dec.
Electric Bond & Share	Newburger, Loeb & Co.	2	Mar.
El Paso Natural Gas	Reynolds & Co.	1	Feb.
El Paso Natural Gas	Schweickart & Co.	—	Jan.
Florida Power & Light	Argus Research Corp.	1	Jan.
General Telephone & Electronics	Argus Research Corp.	4	Dec.
General Telephone & Electronics	Ira Haupt & Co.	—	Mar.
Indianapolis Water	Raffensperger, Hughes & Co. (Indianapolis)	—	Feb.
International Tel. & Tel.	Evans & Co.	3	Dec.
Intermountain Gas	J. M. Dain & Co. (Minneapolis)	5	Feb.
Intermountain Gas	H. Tegtmeyer & Co. (Chicago)	—	Mar.
Interstate Power	Eastman Dillon, Union Securities & Co.	4	Dec.
Kansas Gas & Electric	Shearson, Hammill & Co.	—	Mar.
Kentucky Utilities	Delafield & Delafield	9	—
Lone Star Gas	Francis I. duPont & Co.	—	Mar.
Middle South Utilities	Paine, Webber, Jackson & Curtis	1	Jan.
Mississippi River Fuel	A. M. Kidder & Co.	—	Jan.
Mountain Fuel Supply	Francis I. duPont & Co.	9	Jan.
Mountain Fuel Supply	First Boston Corp.	9	Jan.
Natural Fuel Gas	Eastman Dillon, Union Securities & Co.	9	Feb.
National Fuel Gas	A. C. Allyn & Co.	—	Jan.
New England Electric System	Merrill Lynch, Pierce, Fenner & Smith	3	Jan.
Northern Illinois Gas	Argus Research Corp.	1	Dec.
Northern Natural Gas	A. C. Allyn & Co.	—	Jan.
Ohio Edison	Argus Research Corp.	2	Feb.
Oklahoma Gas & Electric	A. G. Becker & Co.	1	Feb.
Pacific Gas & Electric	Argus Research Corp.	1	Jan.
Pioneer Natural Gas	Paine, Webber, Jackson & Curtis	—	Feb.
Public Service Elec. & Gas	Argus Research Corp.	2	Mar.
Public Service Elec. & Gas	Hirsch & Co.	3	Mar.
Public Service of Indiana	L. F. Rothschild & Co.	2	Mar.
Public Service of Indiana	Blyth & Co.	11	Mar.
Public Service of Indiana	Argus Research Corp.	1	Feb.
San Diego Gas & Electric	Filor, Bullard & Smyth	—	Jan.
Southeastern Public Service	Shearson, Hammill & Co.	1	Jan.
Southern Calif. Edison	A. M. Kidder & Co.	2	Nov.
Southern Indiana Gas & Elec.	Bache & Co.	2	Jan.
Southern Realty & Utilities	Purcell & Co.	3	Mar.
Suburban Propane Gas	Ira Haupt & Co.	—	Mar.
Suburban Propane Gas	Kamen & Co.	—	Feb.
Telefonos de Mexico	N. Y. Hanseatic Corp.	2	Dec.
United Gas Improvement	H. Hentz & Co.	4	Feb.
Utilities & Industries	N. Y. Hanseatic Corp.	6	Nov.
Utilities & Industries	Goldman Sachs & Co.	—	Mar.
Washington Gas Light	A. C. Allyn & Co.	—	Jan.
Washington Water Power	Penington, Colket & Co.	1	—
Western Kentucky Gas	Equitable Securities Corp. (Nashville)	—	Mar.
Western Union	Blair & Co.	5	Feb.
Western Union	Model, Roland & Stone Co.	8	Jan.
Western Union	Hirsch & Co.	3	Mar.
Wisconsin Public Service	Goodbody & Co.	1	Mar.

Tabulations, General Studies, Etc.

Electric Utilities Industry	Orvis Brothers & Co.	4	Nov.
Public Utilities Bulletin	Eastman Dillon, Union Securities & Co.	8	Monthly
Tabulation of Electric and Gas Utility Company Common Stocks	First Boston Corp.	12	Jan.
Electric Utilities Earnings Projections	Blyth & Co.	9	Dec.
Selected Tax Sheltered Securities	Ira Haupt & Co.	1	Nov.

*Published several times a year; last previous list was in December 22nd issue.

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the consumer, thus reducing transportation costs on their products.

A few days earlier the Navy Department disclosed its plans to introduce the fuel cell into submarines as a rival to diesel and nuclear propulsion. The Navy plans to convert some of its conventional diesel power in the submarines to fuel cell power and later to build some small attack submarines, powered with a fuel cell. Vice Admiral Hayward, Deputy Chief of Naval Operations for Development, testifying before the House Committee on Science and Astronautics, said that conversion of submarines to fuel

cells would make them quiet and considerably increase their ability to stay submerged, while the new kind of power would be much less costly than nuclear power. While the new sub would not have the unlimited cruising radius of the nuclear-powered type, it would "have all the cruising radius that its crew can use."

SUBMARINES already use storage batteries for propulsion when submerged, but must resurface in a few hours to recharge the batteries, at which time the noise of the diesel engines may lead to enemy attack.



FINANCIAL DATA ON GAS UTILITY STOCKS

Approx. Revenues (Mill.)			4/5/61 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings.	Per Cent Increase In Share Recent	5-yr. Avg. Earnings	Price- Earnings Ratio	Div. Pay- out	Approx. Common Stock Equity
Pipeline and Integrated Companies											
\$ 7	O	Ala. Tenn. Nat. Gas	26	\$1.20	4.6%	\$1.58De	4%	7%	16.8	77%	42%
240	S	American Nat. Gas	89	3.00	3.4	4.92De	7	7	18.1	61	38
111	A	Ark.-Louisiana Gas	40	1.00	2.5	1.61De	D6	50	24.8	62	40
65	O	Colo. Interstate Gas	44	1.25r	2.8	1.96De	15	13	22.4	64	27
517	S	Columbia Gas System	26	1.10	4.2	1.53De	12	8	17.0	72	40
23	O	Commonwealth N. G.	28	1.10	3.9	1.75De	7	6	16.0	63	55
363	S	Consol. Nat. Gas	60	2.30	3.8	3.19De	D5	2	18.8	72	63
505	S	El Paso Nat. Gas	28	1.30g	4.6	1.46De	10	4	19.2	89	21
59	S	Equitable Gas	42	1.85	4.4	2.32De	D11	3	18.1	80	45
47	O	Houston N. G.	33	.80	2.4	1.67Ja	21	20	19.1	48	21
25	O	Kansas Nebr. Nat. Gas	31	1.19	3.8	1.90De	9	10	16.3	63	39
131	S	Lone Star Gas	28	1.00	3.6	1.28De	7	2	21.9	78	52
85	S	Miss. River Fuel	39	1.60	4.1	2.30De	D6	3	17.0	70	52
32	S	Montana Dakota Util.	37	1.20	3.2	2.03De	D3	6	18.3	59	31
33	S	Mountain Fuel Supply	33	1.40	4.2	1.87De	6	5	17.6	75	49
113	S	Nat. Fuel Gas	29	1.20	4.1	1.86De	7	4	15.6	65	54
188	S	Northern Nat. Gas	34	1.40	4.1	2.20De	15	5	15.5	64	33
43	S	Oklahoma Nat. Gas	35	1.40	4.0	2.04Ja	4	5	17.2	69	34
140	S	Panhandle East. P. L.	56	1.80	3.2	3.05De	D9	4	18.4	59	43
239	S	Peoples G. L. & Coke	76	2.60	3.4	4.28De	7	9	17.8	61	42
35	O	Pioneer Nat. Gas	31	.88	2.6	1.25De	D10	6	24.8	70	40
143	S	Southern Nat. Gas	43	2.00	4.7	2.20De	19	—	19.5	91	36
46	O	Southern Union Gas	30	1.12	3.7	2.00De	33	3	15.0	56	29
555	S	Tenn. Gas Trans.	24	1.10	4.6	1.35De	5	12	17.8	81	28
317	O	Texas East. Trans.	37	1.40	3.8	2.07De	39	—	17.9	68	22
133	S	Texas Gas Trans.	37	1.50	4.1	2.59De	11	10	14.3	58	26
171	O	Transcont. Gas P. L.	24	1.00u	4.2	1.18De	D4	6	20.3	85	21
389	S	United Gas Corp.	35	1.50	3.5	2.25De	D1	2	15.6	67	42
Averages					3.8%		7%	8%	18.3	69%	
Retail Distributors											
\$ 40	S	Alabama Gas	35	\$1.60	4.6%	\$2.15De	16%	—	16.3	74%	33%
68	O	Atlanta Gas Light	49	1.80	3.7	2.91De	9	9%	16.8	62	44
3	O	Berkshire Gas	18	1.00	5.6	1.22N	5	5	14.8	82	42
8	A	Bridgeport Gas	33	1.68	5.1	2.03De	D6	—	16.3	83	54
6	O	Brockton-Taunton Gas	24	1.00	4.2	1.22De ⁵⁹	D6	14	19.7	82	41

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Approx. Revenues (Mill.)	(Continued)	4/5/61 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	Per Cent Increase In Share Earn. Recent	Price- Earnings Ratio	Div. Pay- out	Approx. Common Stock Equity	
89	S Brooklyn Union Gas	34	1.20	3.5	*1.75De	* 5	* 6	*19.4	70	42
52	O Central Elec. & Gas	34	1.20c	3.5	1.95Se	14	8	17.4	62	17
15	O Cent. Indiana Gas	16	.80	5.0	.71De	D17	—	22.5	113	58
7	O Chattanooga Gas	6	.30	5.0	.48N	84	5	12.5	63	54
16	O Elizabethtown Gas	58	1.80	3.1	3.49Oc	30	11	16.6	52	79
77	O Gas Service	41	1.72	4.2	2.60F	16	8	15.8	66	35
9	O Hartford Gas	54	2.40	4.4	3.12De	20	8	17.3	77	53
3	O Haverhill Gas	29	1.60	5.5	1.95F	D1	7	14.9	82	55
23	O Indiana Gas & Water ...	26	1.00	3.8	1.65F	16	—	15.8	61	44
62	S Laclede Gas	29	1.05	3.6	1.60De	27	5	18.1	66	38
9	A Louisiana Gas Serv.	20	.68x	3.4	1.20Ja	D2	—	16.7	57	48
8	O Mich. Gas Utils.	16	.60	3.8	.96De	19	8	16.7	63	32
56	O Minneapolis Gas	37	1.60	4.3	2.16De	—	5	17.1	74	45
18	O Miss. Valley Gas	25	1.20	4.8	1.93Se	D3	—	12.9	62	37
6	O Mobile Gas Service	27	1.10	4.1	1.39Se	11	4	19.4	79	38
8	O New Haven Gas	43	2.00	4.7	3.24De'59	5	5	13.3	62	68
18	O New Jersey Nat. Gas ...	33	.90f	4.7f	*1.56De	*14	*11	*21.2	58	34
130	O Nor. Illinois Gas	52	1.40	2.7	2.29F	22	11	22.7	61	42
11	O North Penn Gas	14	.65	4.6	1.18Je	28	7	11.9	55	65
23	O Northwest Nat. Gas	28	.84	3.0	*1.57De	*20	* 7	*17.8	53	34
364	S Pacific Lighting	58	2.40	4.1	3.43De	31	5	16.9	70	39
15	O Piedmont Nat. Gas	14	.50	3.6	.53De	D30	—	26.4	94	23
2	O Portland Gas Lt.	15	.75	5.0	1.33De	D31	4	12.0	56	29
12	A Providence Gas	11	.56	5.1	.63De	D3	2	17.5	89	48
4	A Rio Grande Valley Gas ..	6	.16	2.7	.29De	D10	7	20.7	55	46
5	O So. Atlantic Gas	17	.80	4.7	.87De'59	D28	—	19.5	92	30
18	S So. Jersey Gas	33	1.10	3.3	1.48F	11	14	22.3	74	53
38	S United Gas Impr.	62	2.40	3.9	3.42De	1	10	18.1	70	50
71	S Wash. Gas Light	66	2.40	3.6	3.79De	8	5	17.4	63	38
18	O Wash. Nat. Gas	31	1.00	3.2	1.45De	4	20	21.4	69	38
13	O Western Ky. Gas	21	.80x	3.8	1.54De	9	11	13.6	52	36
Averages				4.1%		8%	6%	17.5	70%	



FINANCIAL DATA ON TELEPHONE, WATER, AND TRANSIT STOCKS

Approx. Revenues (Mill.)			4/5/61 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	Per Cent Increase In Share Earn. Recent	Price- Earnings Ratio	Div. Pay- out	Approx. Common Stock Equity	
Communications											
\$7,920	S	American T. & T. (Cons.)	127	\$3.60h	2.8%	†\$5.53De	6%	5%	†23.0	65%	64%
405	A	Bell Tel. of Canada	49	2.20	4.5	2.51De	5	—	19.5	88	58
54	O	Cin. & Sub. Bell Tel. ...	111	4.50	4.1	5.89De	6	2	18.8	76	77
317	A	Mountain States T. & T. .	34	.90	2.6	1.14De	9	3	29.8	79	74
405	A	New Eng. T. & T.	53	1.72	3.2	2.37De	7	7	22.4	73	56
1,135	S	Pacific T. & T.	46	1.14	2.5	†1.43De	D3	3	†32.2	80	61
136	O	So. New Eng. Tel.	52	2.20	4.2	2.61De	4	6	20.0	84	66
Averages					3.4%		5%	4%	23.7	78%	
Independents											
\$ 4	O	Anglo-Canadian Tel.	58	\$1.20	2.1%	\$3.39De	D1%	15%	17.1	35%	49%
59	O	British Col. Tel.	47	2.20	4.7	2.78De	D9	—	16.9	79	27
4	O	Calif. Inter. Tel.	18	.70	3.9	.85De	12	NC	21.2	82	24
28	O	Calif. Water & Tel.	33	1.36	4.1	1.81De	D8	5	18.2	75	44
22	O	Central Tel.	30	.88w	2.9	1.59Se	3	—	18.9	55	33
5	O	Commonwealth Tel.	26	.90	3.5	1.47De'59	9	8	17.7	61	35
6	O	Florida Tel.	30	1.00	3.3	1.31De	D1	8	22.9	76	38
1,081	S	General Tel. & Elec. ...	31	.76	2.5	†1.04De	D8	10	†29.8	73	43
25	O	Hawaiian Telephone	20	.54	2.7	†.761a	20	1	†26.3	71	42
10	O	Inter-Mountain Tel.	17	.80	4.7	.92De	19	—	18.5	87	54
9	A	Puerto Rico Tel.	93	1.80	1.9	(y)	D1	—	—	93	42

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Approx. Revenues (Mill.)	(Continued)	4/5/61 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	Per Cent Recent	Increases In Share Earnings	Price- Earnings Ratio	Div. Pay- out	Approx. Common Stock Equity
28 S	Rochester Tel.	27	1.00	3.7	1.64De	6	1	16.5	61	31
12 O	Southwestern St. Tel. ...	30	1.20	4.0	1.74De	20	3	17.2	69	42
13 O	Tel. Service of Ohio ...	35	.36z	1.0	1.33De	21	8	26.3	27	32
47 O	United Utilities	54	1.45	2.7	2.40De	23	7	22.5	60	39
19 O	West Coast Tel.	33	1.36	4.1	1.97De	5	5	16.7	69	37
277 S	Western Union	52	1.40	2.7	1.80De	D31	—	29.0	78	82
Averages				3.2%		5%	4%	20.9	68%	

Water Companies

Holding Companies

\$ 48 S	American Water Works .	25	\$1.00	4.0%	\$1.51De	4%	7%	16.6	66%	19%
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Operating Companies

\$ 5	O	Bridgeport Hydraulic ...	43	\$1.70	4.0%	\$1.86De	59	6%	5%	23.1	91%	55%
17	O	Calif. Water Service ...	27	1.20	4.4	1.51F	D12	2	17.9	79	31	
5	O	Elizabethtown Water ...	30	1.20	4.0	2.20De	59	17	—	13.6	55	60
12	S	Hackensack Water	63	2.40	3.8	*4.05De	*D7	*6	*15.6	59	35	
10	O	Indianapolis Water	31	1.20s	3.9	1.66De	—	5	18.7	72	34	
6	O	Jamaica Water	46	2.20	4.8	3.03De	D7	1	15.2	73	29	
6	O	New Haven Water	68	3.40	5.0	3.49De	20	1	19.5	97	55	
3	O	Ohio Water Service ...	31	1.50b	4.8	1.75De	3	—	17.7	86	32	
11	O	Penn. Gas & Water	32	1.40	4.4	1.82Se	12	6	17.6	77	29	
11	O	Phila. & Sub. Water ...	61	1.80v	3.0	3.24Se	7	5	18.8	56	29	
3	O	Plainfield Un. Water ...	25	1.10	4.4	2.31De	59	44	12	10.8	43	66
6	O	San Jose Water	42	1.30	3.1	2.11F	D8	5	19.9	62	38	
7	O	South. Calif. Water ...	29	1.10	3.8	1.51De	10	7	19.2	73	33	
4	O	Southern Gas & Water ..	27	.80d	7.0d	1.75De	12	5	15.4	46	19	

Transit Companies

\$ 21	O	Baltimore Transit	9	—	—	\$.52De	D50%	—	17.3	—	49%	
11	O	Cincinnati Transit	7	\$.30	4.3%	.55De	D40	10%	12.8	55%	55	
68	S	Fifth Ave. Lines	16	1.00t	6.3	1.07De	365	—	15.0	93	65	
323	S	Greyhound Corp.	22	1.00a	4.5	1.64De	—	10	13.4	61	70	
38	S	Nat. City Lines	24	2.00	8.3	1.73De	D22	—	13.9	116	94	
13	O	Niagara Frontier Trans.	16	.60	3.8	.76De	59	—	21.1	79	67	
20	A	Pittsburgh Rys.	14	.25	1.8	—	—	—	—	—	90	
6	O	Rochester Transit	7	.40	5.7	1.08De	59	26	6.5	37	100	
21	O	St. Louis P. S.	10	.80	8.0	.77De	59	13	13.0	104	93	
13	S	Twin City R. T.	12	1.00	8.3	1.26De	—	—	9.5	87	65	
20	O	United Transit	6	.70	11.7	.89De	59	18	2	6.7	79	54
Averages					6.3%		28%	2%	12.9	79%		

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. *Deferred taxes resulting from liberalized depreciation are not normalized. If normalized, the price-earnings ratio would be higher, and the rate of increase in share earnings would be smaller. †On average shares. D—Decrease. a—Also 10 per cent stock dividend October 24, 1960. b—Also 2 per cent stock dividend September 30, 1960. c—Also one-half per cent stock dividend October 31, 1960. d—Also 1 per cent stock dividend quarterly (included in yield). e—Also 3 per cent stock dividend January 7, 1960. f—Regular annual 2 per cent stock dividend included in yield. g—Stock split 5 for 4 to stockholders of record October 11, 1960. h—Dividend rate of \$3.60 per annum to be established beginning with July 10, 1961, payment. i—Also 10 per cent stock dividend January 15, 1960. q—Indicated new rate after 8-for-1 split July 15, 1960. r—Also 40 per cent stock dividend June 13, 1960. s—One share of 111 Realty Corp. common for each 10 shares held, paid March 31, 1960. t—Paid to date. u—Twenty per cent stock dividend paid January 15, 1960. v—Also 3 per cent stock dividend payable January 6, 1961. (Similar dividend was paid January 7, 1960.) w—Also 1 per cent stock dividend payable December 31, 1960. x—Also 12½ per cent stock dividend payable October 7, 1960. y—Nineteen hundred and sixty earnings estimated at \$3.50 or more. z—Plus 3 per cent stock dividend December 31, 1960. NC—Not comparable.



What Others Think

Principles of Public Utility Rate Making

JAMES C. BONBRIGHT is professor emeritus of finance of the Graduate School of Business of the Department of Economics at Columbia University. After a distinguished teaching career, mostly devoted to the economic problems of public utility regulation, Dr. Bonbright, who needs no introduction to most readers of this publication, still teaches public utility economics to upperclassmen of Columbia University. His background also includes consulting services on utility rates and finance for government agencies and private corporations, as well as service as a trustee on the New York State Power Authority (1931-46), of which he was also chairman (1943-46).

All this is by way of impressive background for a most impressive book, "*Principles of Public Utility Rates*," recently published by the Columbia University Press. It is a fairly large-size book (433 pages) and obviously betrays long and painstaking research. Comparatively few books have been written about the economic structure of public utility rate making, as distinguished from the overall determination of the revenue requirements from the regulatory viewpoint. There was an excellent 1956 book by Russell E. Caywood, "*Electric Utility Rate Economics*" (McGraw-Hill), and the general economics work of Professors

Cabot, Fisher, Glaeser, and Troxel, as well as the late utility executives, Samuel Ferguson and Luther Nash, and some others have touched on the *objectives* of public utility rate structures. But Dr. Bonbright has concentrated to a large extent on the central thesis that there is an inherent inconsistency, if not conflict, between the general regulatory requirement of adequate revenue and the actual managerial process of setting up a detailed rate structure within the framework of the revenue limitations thus imposed.

WHY is this so? Dr. Bonbright sets forth this theme in the second and third chapters of his book. The problem stated simply is this: Reasonable public utility rates (just as in the case of reasonable rates in general) are rates designed to perform effectively as instruments of social control. Yet a system of rates best suited to perform one of multiple functions of social control is, ipso facto, unlikely to perform other functions. Thus, practical rate making emerges as a sort of compromise between conflicting goals.

The book is organized into three major parts. Part One deals with the basic standards of reasonable rates, including the alternative concept of cost and value, competitive price, and social principles of rate making. Part Two deals with criteria of

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reasonable rate levels. Part Three deals with the criteria of reasonable rate structures or rate differentials. Most of the emphasis is on electric rate making, in which the author confesses he has had the most experience.

The legal student reading the first chapter on public utility concept may be a little startled at the cavalier manner in which Bonbright, reflecting the purely economic view, brushes off the traditional distinction between businesses "charged with public interest" and those not so classed. He does this on the basis of *Nebbia v. New York* (1934) 291 US 502, 2 PUR NS 337, with the implication that legislatures are now free to impose the utility status on any business they please, without fear of judicial interference. Since legislatures are not likely to try any such thing, this is perhaps relatively unimportant. In any event, the book is entirely confined to conventional utility regulation.

ONE of the points made in Chapter I is of passing interest, since it foreshadows much of the problem which is discussed later in the work. That is the distinction he makes between public utility service and a truly "socialized service." A public utility, he says, is essentially a *business*—for all the imposition of public controls. Even a publicly owned and operated utility is based on a businesslike assumption that the service will be sold at rates at least equal to the cost. A truly socialized service, on the other hand, is seen in the government operation of streets, highways, parks, zoos, schools, health and police systems—all costly to render but furnished without regard to the consumer's ability to pay, the amount of use, or benefit received.

"Only if a city, having taken over a private electric plant, were to abandon

the effort to make it financially self-supporting in favor of free service . . . could it have socialized the electric service." In that event, of course, it would no longer be a public utility or a business. Dr. Bonbright clearly indicates that he is not in favor of this, and believes that publicly owned utility operations should stand on their own economic feet without the crutch of subsidy.

WHILE this distinction is unquestionably valid from a strictly economic point of view, it probably would not square with the usual concept of socialized utility service in the political sense. When Great Britain (and most other European and even communist countries for that matter) nationalized their utility services, they did not abandon the cost basis for a welfare basis of rate making. Yet, the socialist Labor government of Britain was undoubtedly under the impression that it had socialized such services. Indeed, the argument over whether to pursue socialization of industry further became quite a campaign issue between the Laborites and the Conservatives, and within the Labor party itself, following its fall from power. In this light, the switch over of a business or industry from the area of private enterprise to the area of government control and operation is, *pro tanto*, socialization, regardless of how the rates are charged for service. But this boils down to a matter of definition of a much-abused word.

The business cost standard of rate making thus comes to the fore as the conventional basis for both rate regulation and rate fixing as we know them. But there are dissenting voices whose views and theories Dr. Bonbright covers quite exhaustively in his concluding chapters on marginal costs.

WHAT OTHERS THINK



WHAT are the primary functions of public utility rates? Bonbright lists four: (1) the producer-motivation or capital attraction function; (2) the efficiency-incentive function; (3) the demand control or consumer rationing function; (4) the income-distributive function. None of these functions are mutually exclusive nor necessarily incompatible with the others. But in the development of rates along any single line, there occurs a point at which emphasis on one of these functions means sacrificing consideration of the others. Thus, in order to attract

capital—one of the most prominent and widely recognized functions of utility rates—a company must impose charges which will yield a sufficient rate above operating expenses to suit the investor. Anything less would, at least in the long run, defeat this essential requirement.

Yet, this could never be accepted as the *sole* function, since if it were pursued exclusively the other functions would suffer: efficiency, proper demand control (or consumer rationing), and the income distribution goal (which simply means transferring a compensatory amount of

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purchasing power from those who use utility service to those who produce and sell it).

MODERN economists, according to the author, have placed the most emphasis on "demand control." For this purpose a rate is designed, not so much to induce production, but rather to restrict or influence the demand so that service will be available to all customers under the most economic conditions of usage—the price being a sort of automatic control element. If, to use an extreme example, a municipal utility were to furnish free service or service at very much less than cost, so much of it would be used as to be wasteful and a tax upon the city to expand capacity to keep up with such a great demand. This would be unfair to residents who are subject to high taxes, but make only small use of electric service.

The fourth element, unlike the first three (which are designed to provide the community with adequate kinds and amounts of utility service produced in an economic manner), controls the desirable amount of purchasing power to be transferred from the consumer to the producer. Professor Bonbright distinguishes this factor from mere stimulation of production or limiting consumption. It becomes a means of distribution or redistribution.

DISCUSSING the conflicts between these functions, Dr. Bonbright says:

The first type of conflict arises because, with a regulated monopoly such as an electric power company or a telephone company, financial experience strongly suggests that the type of regulation best designed to maintain corporate ability to raise capital is one which goes as far as feasible toward protecting the security holders against the risks of financial loss. In other words,

maximum security rather than the sporting chance of high gains is the most effective inducement for this type of investment. This view is accepted by modern rate regulation, which undertakes to supply the financial security within limits. But if regulation goes too far in an attempt to supply this security, there arises the serious danger of a loss of managerial incentive toward efficient operation. And some writers believe that American rate regulation has gone well beyond this danger point in its readiness to give the capital-attraction function priority over the efficiency-incentive function of the price system.

The second type of conflict among functions of utility rates—that between the capital-attraction and the consumer-rationing functions—is of even more importance from the standpoint of rate theory. To be sure, performance of both of these functions calls for the acceptance of a cost-of-service standard of reasonable rates (or of reasonable *minimum* rates), with the result that there is a degree of harmony between the two functions. But the harmony is not complete, since the cost relevant to the capital-attraction standard is total experienced cost, whereas the cost most clearly relevant to the consumer-rationing standard is prospective incremental cost—the estimated additional cost of additional units of service. In consequence, the rates of charge that would be best designed to serve the one objective of rate making are not the most efficient rates for the attainment of the other objective. Standard public utility regulation is vaguely, though imperfectly, aware of this dilemma and attempts to meet it by discriminatory deviations from cost pricing of a "value-of-the-service" character. On

WHAT OTHERS THINK

the other hand, some economists have supported another, more radical, escape from the dilemma, in the form of a proposal to base rates entirely on marginal or incremental costs, any resulting deficiencies in total revenue being made good by tax-financed subsidies.

CHAPTERS IV and V deal very thoroughly with the historical controversy between cost of service and value of service in rate making, but primarily from the economist's rather than the legal view. Chapter VI deals with competitive price, or at least a hypothetical competitive price, as a substitute for a regulated price. This is an intriguing proposition, but Dr. Bonbright feels it has definite limitations.

Chapter VII deals with social principles of rate making and takes into consideration such matters as consumers' ability to pay and the more leftish welfare concept of utility service. In a restrained way, the author is quite critical of this.

Fairness of rates, as distinguished from function efficiency, is the subject of Chapter VIII. As to this, the author concludes that the proper rôle of fairness in determining reasonable rates should be subordinate—when given separate recognition in rate making—and regarded only as a restraint on unqualified acceptance of rate making based on maximum economic or social efficiency. Chapters X, XI, XII, XIII, XIV, and XV deal with such important standard topics in this area as fair rate of return, the cost rate base, and the replacement cost rate bases, respectively.

IT is in the third part of his book, on the rate structure, that Professor Bonbright comes to grips with the inherent conflicts in the various rate-making goals already mentioned, especially in his Chap-

ter XIX on rate discrimination. Not every rate discrimination, of course, is an unfair or illegal discrimination (otherwise, airlines would have to charge passenger fares by the pound). Rate differentials, when properly considered, are not only necessary but failure to charge rate differentials under various conditions of service would in itself be the rankest form of depreciation.

The concluding chapter on the philosophy of marginal-cost pricing is probably the most provocative one in this excellent work. The author distinguishes between the so-called long-run and short-run marginal cost rate making. This is supposed at least to fulfill the important function of securing optimum utilization of whatever utility plant capacity exists at a particular time. But, as Dr. Bonbright points out, it surrenders other functions of even greater importance, including, particularly, that of the long-run control of the demand for and supply of utility services.

The book closes with a critical comment which the author makes on the policy of subsidizing government-owned and -operated utility services. He ends his book with this statement:

... My present, tentative, opinion is that the weight of the argument favors attempts to put publicly and privately owned electric power systems more nearly on a par, taxwise, by a combination of a heavier public tax load and a lighter private tax load. But this is not a book on public utility taxation or on public ownership, and the questions raised here demand thoroughgoing separate studies.

AMONG the most valuable features of Dr. Bonbright's volume is the extensive documentation, clearly revealing the rich, broad, and thorough background of the author in the economic literature in this

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field. The bibliography of publications cited in the footnotes is a listing of probably the very best and most thoughtful articles on utility rate making and allied topics by the most competent authors. Furthermore, Dr. Bonbright does not simply refer to these sources, but, in almost every case, by excerpts and di-

gested analysis shows their very apt relevancy to the related text. There are also a very good index and table of cases.

—F. X. W.

PRINCIPLES OF PUBLIC UTILITY RATES. By James C. Bonbright. Columbia University Press, New York, New York. 1961. Pp. 433. Price, \$10.

Financing Utility Growth

BEN S. GILMER, the president of the South's most far-flung public utility, recently told the Southeastern Electric Exchange, in a speech at Boca Raton, Florida, that the task of financing utility growth ahead is a greater challenge than any so far met by utilities in the postwar economy. Mr. Gilmer, who is president of the nine-state Southern Bell Telephone & Telegraph Company, predicted that the 1960's will require as much expansion of utilities in the South as did the 1950's.

Very large capital investment sums must be raised by utilities in the South for the expansion that will be needed for the region's continued overall growth and progress, Mr. Gilmer stated. This comes, he added, at a time when the supply of available capital is strained by unprecedented world-wide demands for development and expansion funds. He related that monetary authorities generally expect the world-wide shortage of investment capital that exists today to continue for many years. Capital can be accumulated only as savings out of production, and this will be done in increasing amounts only when there is an increased incentive to save, he noted.

The telephone executive declared that meeting successfully the challenge to raise the necessary investment funds will require improved inducement for capital attraction. He observed that with compe-

tition increasing for investment capital generally, and with utilities having to compete against nonregulated, nonutility businesses for the investors' dollars, utilities will require earnings that are broadly comparable to those of other well-managed progressive companies. They are too far below today, Mr. Gilmer believes.

IN order to reinforce this premise, he stated that the margin of safety in terms of stability of earnings, heretofore conceded automatically to any business designated "regulated utility," is ever becoming less and less real.

Mr. Gilmer carried the comparisons of utilities with nonutilities further and referred to the new competition which the utilities must face. He observed not only must the utility companies compete as always in the open market for capital, but they must also continue to compete for good employees and for managerial talent. Today, he stated, the utility must depend much more on the results obtained by aggressive marketing of optional or luxury items. In the past heavier reliance could be placed on basic services.

Citing statistics, Gilmer declared that the best earning companies, whether regulated or not, do the most for consumers, employees, and investors, and, in the long run, good earnings are in the best interest of all three.

The March of Events



Desalting Problem Unsolved

THE Interior Department has told Congress that an 11-year program to find a cheap way to make salt water drinkable is nearing its end and the goal has not been met. The progress report was made by Charles F. MacGowan, director of the Office of Saline Water, during hearings held by a House Appropriations subcommittee. Testimony was made public on April 5th.

"Although progress in saline water conversion has been made," MacGowan said, "the low-cost goals have not been achieved and new ideas and new processes are needed. It is very unlikely that the conversion processes selected for the demonstration plants are the best that can be developed," he added. "Further research cannot only improve these processes but also holds promise of developing entirely new methods which may permit the attainment of a major breakthrough."

California

Telephone Tax Measure Offered

A PROPOSED state constitutional amendment has been introduced in the California legislature which would require telephone companies to pay an annual tax of 1 per cent on business done in California in return for the use of city streets and county roads.

Senator Richards of Los Angeles, sponsor of the measure, said it was made necessary when the courts ruled that telephone companies, unlike other utilities, are exempt from the usual franchise taxes paid for the privilege of using public streets for the conduct of company business.

The proposed amendment, drafted fol-

lowing an eight-year study of the problem, would impose an annual tax of 1 per cent on local and toll service revenues received by the telephone companies from intrastate communication services and would be distributed to the cities and counties on a population basis.

The levy would be in lieu of all other local taxes, including business licenses, excise, franchise, and local income taxes, as well as ad valorem taxes on telephone company rights of way.

Richards said his proposed amendment would put the telephone companies in the same position as gas, electric, water, and transportation companies and other utilities using public streets and paying franchise taxes for that right.

Florida

Utility Tax Increase Plan Opposed

OPPPOSITION to a proposal to double Florida's $1\frac{1}{2}$ per cent gross utility tax was expressed by utility officials at a recent meeting in Orlando. Such an increase in the tax, which is imposed on all utility bills, has been suggested by Governor Bryant to raise an estimated \$8.9 million in additional state revenue.

The group which met in Orlando sent a protest telegram to the governor. The telegram, signed by John Kelly of Gainesville, president of the Florida Municipal Utilities Association, who served as chairman at the meeting, said in part as follows:

Spokesmen for the electric, gas, and telephone utilities of Florida met in Orlando . . . to consider the impact that the proposed doubling of the state gross

receipts utilities tax, as suggested by the governor, would have on the people of Florida.

In attendance were representatives of the Florida Municipal Utilities Association, and the Florida REA State-wide Association composed of the municipally owned electric utilities and the rural electric co-operatives, the Florida Natural Gas Association, the telephone industry, and the private electric utility companies.

It was the unanimous opinion of all these utilities serving the people of Florida that regardless of the form in which this tax would be levied its impact would fall on the consumer and would be an additional tax which their customers would have to pay. . . .

The group expressed the hope that the governor would reconsider his suggestion.

Kentucky

Gets TVA Coal Contract

WEST KENTUCKY COAL COMPANY has been awarded a Tennessee Valley Authority contract to supply 1 million tons of coal a year for ten years. The contract will mean an additional 50,000 man-days of work a year at West Kentucky's Pleasant View mine.

The news was confirmed by the chief of TVA's procurement branch, division of material. He said the price for the 10 million tons of untreated coal totaled approximately \$20 million F.O.B. at the mine.

Starting date for delivery of the coal was April 10th.

Michigan

Fight to Keep Nuisance Taxes

SEVEN Republican state senators have built up pressure to keep parts of the \$50 million nuisance tax package on the books beyond its June 30th expiration date. A bill to retain the \$10 million use tax on telephone and telegraph companies

was described as a vehicle to keep all of them.

Senator Roberts (Pontiac) and six co-sponsors said the first target was the 4 per cent use tax on the utilities. Other temporary taxes are being collected on liquor, beer, and tobacco.

THE MARCH OF EVENTS

North Dakota

Power Co-ops Seeks REA Loan

POWER co-operatives in North Dakota have asked the Rural Electrification Administration for a \$44,312,000 loan to build the first of five big electric-generating plants planned in co-ordination with private companies.

Seeking the loan for the first 200,000-kilowatt, lignite-burning units are 32 electric distribution co-ops in the Dakotas and Minnesota and three power co-ops, Minnkota Power of Grand Forks, North Dakota, Central Power of Minot, North Dakota, and Dakotas Electric of Bismarck, North Dakota.

The second plant will be built and financed by Otter Tail Power Company and Northern States Power Company by the fall of 1969.

The power companies and co-operatives said they plan to construct five plants with a combined capacity of 1 million kilowatts by 1977. The first plant is

to be built at Stanton, North Dakota, near the Missouri river.

Would Abolish Telephone Excise Taxes

A RESOLUTION adopted by the state public service commission urged discontinuance of federal excise taxes on telephones and other communications services. Recalling that the tax was adopted as a wartime measure, Commission President Martin Vaaler said its intent was to discourage personal use of the then overburdened communications installations and to increase revenue. He asserted the tax should be discontinued. "Tax relief to the public is far overdue."

The resolution said the federal excise taxes distort telephone rates, have a restrictive effect on the use of communications services, are discriminatory, and impair the growth and improvement of such services. Smaller telephone companies are particularly affected, the resolution said.

Oregon

House Rejects Public Power Measure

A BILL that would have permitted peoples utility districts to issue revenue bonds without a vote of the people

was rejected by the Oregon house of representatives.

Opponents attacked the proposal on the basis of its relinquishing rights of the people and on its "collectivist" tendencies.

Pennsylvania

Railroad Rejects Proposal

A SUGGESTION that the Pennsylvania Railroad take control of the Philadelphia Transportation Company by exchanging stock on a share-for-share basis was declined emphatically by the top executive of the PRR.

The suggestion, contained in an advertisement placed by an investment firm and published in the newspapers, called for acquisition of the city's transit system by the railroad as the only way the PTC could become "an ultramodern self-supporting unit."

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James M. Symes, chairman of the board of directors of the Pennsylvania, turned thumbs down on the suggestion immediately upon being informed that it had been made.

"It has been demonstrated that private enterprise cannot operate mass transportation systems for commuters in a metropolitan area at a profit," Symes said.

Tennessee

TVA May Operate Plant

THE Tennessee Valley Authority confirmed that it is studying the advisability of taking over operation of the steam-electric power plant of the city of Memphis. Earlier it had been reported from Memphis that the city wants to rejoin the TVA power system and is trying to interest the federal agency in buying or leasing the big steam plant there which went into operation in early 1959.

A TVA spokesman said the TVA directors were studying some such arrangement with respect to the Memphis steam plant. He said TVA directors had not yet approved an extension through 1964 of the existing contract by which the federal agency furnishes supplemental power in the summer to Memphis. The

city otherwise would not have enough power available from its own plant for the summertime air-conditioning load unless it added another \$50 million unit.

The city's 20-year contract with TVA expired June 1, 1958, and was not renewed. However, Memphis since then has continued to take power from TVA on an interim basis as needed. At one point the city took court action in complaint against having to pay higher rates than previously.

There have been repeated signs, it was reported, that Memphis is unhappy about its experience outside the TVA family. It has had to raise rates to consumers once already and is concerned over the cost of building enough capacity to meet growing requirements.

Vermont

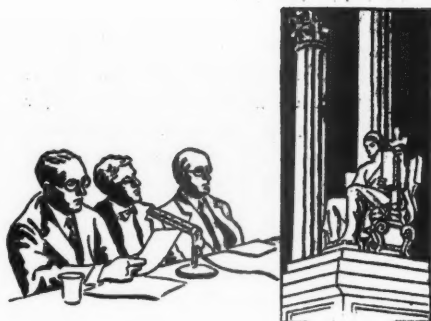
Tax Proposal Supported

PROPOSED increased taxes on gross income to finance expanded regulatory activity by the state public service commission were given almost unanimous support by major utilities in the state at a hearing conducted recently by the banking and corporations committee of the lower branch of the state legislature.

A plan to modify increased taxes on utilities, as proposed in the measure under consideration, was presented to the committee by Commission Chairman Ross. Under this plan, taxes on all utilities except railroads, express companies, and telegraph companies would be in-

creased to 0.25 per cent of gross operating revenues. Ross said this would raise an estimated \$96,300 in additional revenue for the commission and finance several technical staff additions.

There was also support for another proposal submitted by Ross under which a reserve fund would be built up by the commission for hearings which might be called on its own motion. This plan, as revised, would impose a levy of 0.1 per cent on utility gross operating revenues for a two-year period beginning on 1960 revenues. This levy would expire at the end of the period unless the next legislature acted to continue or modify it.



Progress of Regulation

Trends and Topics

Exclusion of Rented Property from Rate Base

THE recent decision by the Indiana commission that property rented to others should be excluded from the rate base of a gas company (37 PUR3d 138) is in harmony with many other decisions. Property which is not used for public utility activities is usually excluded. In some situations, however, rented property has been included in the rate base, but this has been justified by special circumstances.

Leased Property Excluded

Land leased to another concern was excluded by a federal district court (PUR1925C 705). The California commission excluded arc gas lamps used for competition with an electric company but leased to those who used the lamps (PUR1918A 506). Railway property not strictly used for railway purposes, and leased to others, has been excluded in Illinois (PUR1921B 229), Massachusetts (PUR1916F 221), New York (PUR1927D 637), and Pennsylvania (24 PUR NS 433).

Land and structures were excluded in Missouri (PUR1927E 470), a rented powerhouse was excluded in Nebraska (PUR1924A 627), and buildings leased by a water company were excluded in Virginia (PUR1932C 342). An engineer's house and garage were excluded by the Connecticut commission (23 PUR NS 19).

The Colorado supreme court ruled that a transmission line leased by an electric company should be excluded from the rate base (14 PUR NS 68), although the Colorado commission, in an earlier case, had included a transmission line leased to a generating company for a long term at a nominal rental, which resulted in considerable saving by reason of the utility being released from line losses and maintenance (PUR1928C 19). Water rights of an electric company leased to a lumber company were excluded by the Washington commission, although it was claimed that the company received a more advantageous rate for wholesale power supply as a result of this arrangement (5 PUR NS 204).

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The New York commission excluded property leased to an individual for display of recreational exhibits never employed in the gas business (21 PUR NS 353). The Federal Power Commission excluded a dock constructed by a licensee for tenants (44 PUR NS 291). A building leased by a telephone company to others was excluded by the Wisconsin commission where expenses and revenues had also been excluded (85 PUR NS 142).

Grounds for Including Rented Property

The Indiana commission in one case included a building owned by a telephone company although rooms in the building were rented, where adequate rents were included in gross revenues (PUR1920D 83). The Michigan commission included an office building, although part of it was leased to another company at a fair rental (PUR1922A 385). The Pennsylvania commission included a three-story building, although two stories were rented, where the records did not permit segregation of value of the used and unused real estate (PUR1929D 265).

The Virginia commission included summer resort property owned by a transit company and leased to an amusement company at a low annual rent where it appeared that continued operation of a transit line would not be justified if this were excluded (PUR1924A 566).

The federal court saw no reason for excluding property purchased by the Brooklyn Borough Gas Company although it was subject to a short-term lease and tenants occupied the upper floors. Rents collected were used to reduce operating expenses (PUR1927A 200).

Review of Current Cases

Consumers Protected against Avoidable Taxes And Other Expenses in Water Rate Case

A WATER rate decision of the New York commission was sustained on review brought by the New York Water Service Corporation on challenges to the rate base and other computations. The court found the company's grounds insufficient in law to warrant judicial interference. Based on a 1959 rate base, the commission had allowed a rate of return of 6.49 per cent. At the time of this proceeding the company served five separate local areas in New York. It formerly operated more extensively in the state, but lost some of its plants by local condemnation.

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Projection of Operating Results

In this rate determination, the commission had weighed into its calculations the company's operations during 1958 and half of 1959, along with a six-month projection to the end of 1959. The company urged that further estimates of operations extending to mid-1960 be used, arguing that because of inflationary trends and intended improvements and additional expenses a higher base would be found, with a substantially larger increase in rates.

The court found no error of law in the

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commission's limited projection. This is a matter of degree, it was pointed out, and the projection to the end of 1959 was a reasonable limitation.

Expenses for Lost Plants Eliminated

In calculating the company's expenses for its five remaining districts, the commission had eliminated the proportion of central administrative expense applicable to two other districts which were lost from the system by condemnation in 1959. The company argued that its total administrative expenses continued on in 1959 in spite of the elimination of the two districts and that those expenses were necessary to proper maintenance of service in the remaining five districts.

The commission contended that some of the accounting work which the company sought to charge as utility operating expense was for adjustments with the public authority which took over one major plant, and that the cost of this work should not be borne by the consumers. It was also contended that the commingling of the company's utility and nonutility business had led to overloading the consuming public with portions of joint office expense attributable to the nonutility business. The court thought the commission was entirely warranted in eliminating the proportional expense of the two condemned plants.

Avoidable Taxes Disallowed

In order to avoid paying a federal capital gains tax on a portion of the proceeds from the condemnation and sale of its property, the company had elected to consider that some of the proceeds were reinvested in utility plant. But property thus purchased must be depreciated for tax purposes on the cost of the original property. This resulted in a substantially higher federal tax than if the new property had been bought and depreciated in

the usual way. The commission had disallowed the increased tax in fixing the tax base, indicating that the company had elected to save its stockholders a capital gains tax in an area of no value to the consumer.

The court thought the company's election, in effect, sought to pass on an unfavorable end result—a higher tax—to its consumers. Though the court recognized that cogent arguments could be made for the company, nevertheless, the commission's determination was neither so arbitrary nor so wrong as a matter of law as to require judicial interference.

It was further held that the commission properly disallowed as an operating expense the payment of federal taxes which resulted from an election by the company not to claim for rate case purposes tax deductions on interest of sinking-fund debentures. These debentures, the court declared, were sufficiently related to the utility property and business, and a lien on its assets, to indicate that they should be included as a tax deduction in respect of such business.

Also justly disallowed were legal fees paid in connection with litigation instituted by dissatisfied stockholders, and legal fees relating to a disapproved note issue intended to retire stock held by such dissatisfied stockholders. The dispute with the stockholders had no important bearing on the management of the utility part of the business but related to the distribution of the substantial capital gains from the condemnation and sale of company property.

Land Sale Profit Goes to Consumers

In 1951 the company sold land which had been used for utility purposes but which was no longer useful. A large net profit was realized. In a subsequent rate proceeding, the commission ruled that the company's return should be reduced

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by one-seventeenth of the profit annually over a period of seventeen years. This ruling, uncontested up to now, was followed in the instant case. The company objected.

The court observed that the commission allows land sold at a loss to be debited to the depreciation reserve, thus increasing the rate base. If land is sold at a profit, it is required that the profit

be credited to depreciation reserve, with a corresponding reduction of the rate base and resulting return. The utility is thus protected from a loss in the sale of land in its operations, said the court, and it seems reasonable that it should pass on a profit to the consumer. *New York Water Service Corp. v. New York Pub. Service Commission*, 12 AD2d 122, 208 NYS2d 857.



Utility Providing Inadequate Service Given Chance to Improve

THE Missouri commission withheld ruling on an application by Grand River Mutual Telephone Corporation for authority to enter the territory of the Farmers Mutual Telephone Company and provide adequate service in place of the poor service then being furnished in the area. Apparently, only switcher service was being provided by Farmers Mutual, which the commission declared inadequate. The latter utility showed, however, that it plans to rebuild its system and convert to dial operation, though it had filed no application with respect to conversion.

The commission pointed out that since Farmers Mutual is a regulated public

utility it must be given an opportunity to improve its service before another company may be authorized to take over its territory. Farmers Mutual was ordered to submit plans for rehabilitation of its plant to provide adequate service.

Grand River Mutual was authorized, on the other hand, to construct facilities and furnish modern dial service in the service area of another company, Graham Telephone Company. It did not appear that Graham offered any evidence that it intended to improve its service which was plainly inadequate. *Grand River Mut. Teleph. Corp. v. Farmers Mut. Teleph. Co. of Maitland et al.* Case No. 14,435, November 28, 1960.



Telephone Rate Increase Founded on Capital Cost and Revenues Allocated through Exchange Grouping

THE Ohio commission allowed General Telephone Company of Ohio \$1,435,700 of a requested rate increase of \$2,763,700. The additional revenue will result in a rate of return of 5.8 per cent on a reproduction cost new less depreciation rate base. A 12-month test period ending June 30, 1959, was adopted, and December 31, 1958, was used as the date certain for plant valua-

tion. As a consequence of taking a test period of which the date certain is the mid-point, said the commission, no annualization of the company's revenues and expenses is necessary and thus the element of speculation and judgment is to that extent reduced.

Capital Cost and Rate of Return

Witnesses for the company sought a

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rate of return of about 7 per cent. They used a capital structure of 49 per cent debt, 14 per cent preferred stock, and 37 per cent common equity. This included bonds issued after the test year. The actual capital structure as of the date certain—the mid-point of the test year—was 50.7 per cent debt, 14.6 per cent preferred stock, and 34.7 per cent common equity. The commission calculated the embedded cost of debt as of the end of 1958 at 4.1 per cent, taking into consideration notes payable at that time, which were subsequently refunded by a bond issue toward the end of 1959. The actual embedded cost of preferred stock was 5.32 per cent.

The two company witnesses contended that the cost of equity was 10.8 and 10.5 per cent, respectively. The former figure was apparently based primarily on a dividend rate of 7 per cent at a 65 per cent pay-out ratio. The latter appeared to be founded primarily on interest and preferred dividend coverage relationships. Considering all the evidence, the commission concluded that 5.8 per cent was a fair rate of return.

Using the actual capital structure at the end of 1958 and costs of debt and preferred stock of 4.1 and 5.3 per cent, respectively, this rate of return would provide a return of approximately 8.5 per cent on the equity portion of the rate base. This, in turn, would enable the company to pay a dividend of 6 per cent on the equity at a pay-out ratio of about 70 per cent after the payment of hypothetical interest and preferred stock dividends. An equity return of 9.5 per cent was urged in a dissenting opinion filed in this case.

Depreciation and Rate Base Items

The company was limited to a composite depreciation accrual rate of 4.8 per

cent. A requested rate of 5.32 per cent was denied for lack of any evidentiary support. It also appeared to be incompatible with the accrual rates of other telephone companies.

A claim for organization cost as an item in the rate base was similarly denied because there was no substantiating evidence. Nor was an allowance granted for materials and supplies or for cash working capital, since there were ample funds available for the company's use from tax accruals to cover these requirements. Rate case expense was amortized over a period of three years in view of the company's rate case history and the prospective average period between rate proceedings.

Exchange Rate Groups

The applicant proposed to classify its exchanges into rate bands or groups on the basis of the number of telephones in the local service area. The commission observed that it has approved the grouping of exchanges in other proceedings as an acceptable method of allocating the local service portion of the allowable gross annual revenues. Any exchanges assigned to a specific rate group at the time of a rate proceeding must continue in the same rate group, however, until a subsequent rate adjustment is specifically authorized.

In adopting such grouping in this proceeding, the commission provided that the basis for placing an exchange in a specific band or group would be the number of main station services in the local service area (main primary stations, pay stations, and PBX trunks) as opposed to the basis suggested by the company; *i.e.*, the number of telephones in the local service area (including business extension stations, residential extension stations, PBX stations, and PABX stations).

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Also, within each band or group the rate structure should provide different main station service rate levels for magneto, common battery, and dial exchange areas.

Noting the company's present construction and conversion program, the commission authorized it, coincident with the conversion of magneto and common battery exchange areas to dial operations, to withdraw the discounts attributable to common battery and dial operations, without further application to the commission.

Extended-area Service

In approving proposals to establish extended-area service in several areas, the

commission noted that it has, as a matter of policy, encouraged the development of extended-area service and the expansion of local service areas, inasmuch as this service more adequately meets the requirements of subscribers. Subscribers apparently prefer to pay flat monthly rates for unlimited calling privileges through a geographic local service area, rather than to pay toll charges on each individual call. The company was required to explore and report on the feasibility of possible metropolitan extended-area service in a number of other areas in its service territory. *Re General Teleph. Co. of Ohio, Case No. 28,168, February 9, 1961.*



Tax Accounting under Accelerated Depreciation

SINCE, for the purpose of computing federal income tax expense for rate making, the amount of a current tax reduction arising from accelerated depreciation may not be charged against current income, the Ohio commission authorized an electric company to discontinue the use of a previously prescribed account, "Provision for Future Federal Income Taxes,"

and thereafter to charge as federal income tax expense in this respect only the actual taxes currently due. The company will be permitted to follow such accounting procedures in respect to accelerated federal tax depreciation as it may elect to take under § 167 (b) of the Internal Revenue Code of 1954. *Re Ohio Power Co. No. 26,190-A, February 20, 1961.*



Officers' Salary Excluded from Utility Expenses

THE Ohio commission granted a small gas company a rate increase calculated to afford a rate of return of 5.75 per cent on a reproduction cost new less depreciation rate base. The increase, which will average about 9.5 per cent, is substantially less than was requested.

The commission found that the salary of the company president could not properly be regarded as an expense of operating the utility. Witnesses were unable to specify any definite duties assigned to the president. Testimony showed that this

officer was in his eighties and that "he's not active in the business only that he incepted the business and had the vision of the Vanlue Gas Company and he's still active as far as that goes in the financial matters of the company." In view of this evidence—or lack of evidence—the commission concluded that the president was not actively engaged in the affairs of the company and that payments to him must be treated as dividends rather than as operating expense. *Re Vanlue Gas Co. No. 29,122, February 9, 1961.*

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Investment Risks Attending Partnership Considered in Fixing Rate of Return

THE Ohio commission rejected a proposal made by the commission's staff accountants to allow a water utility partnership the regular corporate income tax as a part of the cost of service. Since the business is a partnership, the only federal income taxes paid are the personal income taxes of the individual partners.

With the elimination of this item, the utility would earn 5.13 per cent on its depreciated reproduction cost rate

base. This was held to be inadequate.

A partnership involves more risk with regard to investments than does a corporation, said the commission, because of the limited liability of the latter. In view of this consideration, the commission found that a rate of return of 7 per cent would be reasonable for this utility. Appropriate rates were authorized. *Re Champion Water Co. Case No. 28,943, February 17, 1961.*



Natural Gas Company Wants 1.93 Per Cent Return, Gets 6.5 Per Cent

IT turned out to be a matter of arithmetical semantics. Jacksonville Gas Corporation, an almost wholly owned subsidiary of The Houston Corporation, had submitted evidence that the proposed rates would produce a return of only 1.93 per cent, but that the company was, nevertheless, supporting such rates.

On the other hand, when the Florida commission applied the net operating income derived from its calculations to the rate base found reasonable the result was a return of 7.77 per cent.

The company had converted from manufactured to natural gas, and had obtained commission approval of temporary rates. At this proceeding to fix permanent rates, the question was how much of a reduction should be ordered.

Cost-of-capital Variance

The return issue was compounded by a situation which made a cost-of-capital study difficult to relate to a rate of return. The company had total outstanding capital of \$2,769,044. The net plant in service rate base had been fixed at approximately \$4.5 million. Also carried on

the company's books, in an amount of \$4,201,418, were advances from the parent company. If such advances were included in the utility's capital structure, the total capital would have amounted to \$6,970,462.

If the commission were to determine the earnings requirements on the actual capital structure and to apply those dollars to the rate base, a very low rate of return would result. Conversely, if the commission were to prorate the advances to the capital structure, assigning a cost, and applying the dollar earnings required to the much lower rate base, a very high rate of return would result.

Advances from Parent

The only reasonable alternative appeared to be to work with percentages only, eliminating the dollar requirements and assigning the per cent requirements to the rate base. In this manner, the variance between the rate base and the capital structure presented no particular problem. The only problem was the method of treating the advances from the parent company. Should they be ignored

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and the cost of capital figured only on the actual amount outstanding, or should the advances be treated as a part of capital, and if so, what costs should be assigned thereon?

The utility had not considered these advances as a part of its capital structure, and the commission found no basis for setting up a fictitious capital structure by giving the advances such an assumed classification. It, therefore, used actual cost of long-term debt and allowed reasonable earnings on common equity. The common equity ratio was 41.53 per cent of total capital and was a comparably high ratio with correspondingly less risk. For that reason, the commission allowed earnings of only 10 per cent on common equity and arrived at a total cost of capital of 6.49 per cent.

The commission did not consider the rate of return of primary importance in the case because the utility had sought only 1.93 per cent on the basis of its interpretation of its operating experience and in the light of its projected operations. The commission, though, did not agree with the utility's estimate that its proposed rates would permit it to earn a return of only 1.93 per cent. The commission was convinced the utility had underestimated its projected earnings. The commission found that a return of 6.5 per cent was reasonable.

Net Plant in Service Rate Base

The major element in the rate base, plant in service, was adjusted downward

by excluding land and structures carried as distribution property which had been retired as no longer useful after the conversion to natural gas.

Nonrevenue-producing property was excluded from construction work in progress. Customer advances for construction were included in the rate base. Amounts applicable to production materials and appliances and appliance parts were excluded from the materials and supplies allowance. The cash working capital allowance was adjusted downward by excising joint administrative and general expenses allocated from the parent company which were neither billed as an expense for distribution nor collected.

In addition, conversion costs and property losses incurred by the company were held to be excessive expenses which could not be capitalized and had to be amortized over a number of operating periods.

Customer Service Charges

The commission approved a proposed service charge of \$2.50, a connect charge of \$2, and a disconnect charge of \$2 when the total bill for the period was less than \$15. The latter charge, however, was not to be applied when the customer was transferring from one location to another within the company's service area. A minimum charge of \$1.50 for the first three therms for residential customers was considered fair and reasonable. *Re Jacksonville Gas Corp. Docket No. 6072-GU, Order No. 3136, March 13, 1961.*



Contract Provision Not Bar to Continued Service

THE North Carolina supreme court reversed and remanded a judgment denying an injunction to an electric co-operative barring an electric company from serving in an area which had been

annexed to a city. A contract between the company and the co-operative for the sale of power to the co-operative provided that neither would duplicate the other's services. This provision, held the

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court, did not bar the company from serving customers which the co-operative could not lawfully serve in the annexed area. However, the co-operative had the right to continue to serve members who had formerly lived in the rural area but were now a part of the city by virtue of the annexation. Since co-operatives, by statute, could operate only in rural areas,

residents in the annexed areas who desired to become members of the co-operative could not be served by the co-operative. It lacked a franchise from the town to so serve, aside from statutory restrictions. The company, on the other hand, could serve such residents. *Pee Dee Electric Membership Corp. v. Carolina Power & Light Co. et al.* 117 SE2d 764.



Transit Fare Increase Covers Wage Hike But Rules out Special Class Fares

THE Connecticut commission authorized The Connecticut Company, which furnishes transit bus service in Hartford, New Haven, and Stamford, to put into effect a rate increase calculated to result in an operating ratio of expenses to revenues of 95.11 per cent. The new 25-cent cash fare, applicable only to the first fare zone, will afford additional annual revenues of \$878,000 and will cover a wage arbitration award of \$858,000, along with other increases in expenses. The company had requested a revenue increase of about one million dollars.

Opponents suggested that if the company had retained former earnings, fare increases would not be necessary at this time. The commission observed that former earnings, if any, are the property of the owners of the enterprise and cannot be the basis for the commission's determination of a request for higher fares. Such determination must be based on present and prospective earnings.

No Discriminatory Fares

In reducing the proposed additional revenues from one of the company's districts, the commission observed that it was its policy for each division to be self-supporting in so far as possible since it would be unreasonable to require patrons in one operating division to provide a

materially greater margin of profit than that afforded in other divisions.

From time to time proposals have been advanced for reduced fares for specific classes of patrons; for example, senior citizens. To prescribe reduced fares for any specified group of patrons, said the commission, would constitute unwarranted discrimination and require that some means be found to insure that sufficient additional revenues be received to cover the cost of service. Besides, the ascertainment of specific individuals, such as senior citizens, who are eligible for reduced fares, would involve many administrative problems. In approving a 15-cent student fare, the commission also rejected the idea of requiring higher adult fares in order to subsidize unduly low student fares.

No Income Tax Expense

The allowed operating ratio was derived without making any provision for federal income taxes. The Connecticut Company is a wholly owned subsidiary of the New Haven Railroad. A consolidated return is filed, and because of the large deficits sustained by the railroad in recent years, no income tax is paid. Except for this situation, The Connecticut Company would be subjected to income tax liability which might compel a

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higher level of fares. Thus, the commission pointed out, although it has been contended that this company's problem could be solved by the divestment of its stock by the present owner, the fact is that such divestment might have the practical effect of increasing expenses and necessitating higher fares.

On Solving Transit Problems

Mentioning various proposed plans which have been suggested at one time or another for the solution of the problems of the transit industry, such as a stand-by charge for those benefiting from the availability of bus service and public

ownership and operation, the commission reiterated its opinion that the solution of the chronic problem of rising expenses and diminishing patronage may be achieved by the co-operative efforts of the carrier, its patrons, municipalities, merchants, and all others concerned with the need for preserving local bus transportation. Fare increases alone will not solve the problem.

In deciding this case, the commission assumed a continuation of the present considerable tax relief enacted by the 1959 session of the state's general assembly. *Re Connecticut Co. Docket No. 9990, February 15, 1961.*



State Reimbursement for Utility Relocation Upheld

THE Delaware supreme court declared constitutional a statute providing for state reimbursement to public utilities for the cost of removing and relocating facilities when necessitated by the construction of interstate highway projects.

The basis of the attack on the statute was that it provides for the appropriation of public funds to a private corporation not for a public purpose. It was contended that because the utility companies are obligated under their franchises to remove and relocate their facilities, the state is making a gift to them in yielding its right under the police power to compel the utilities to relocate their facilities at their own expense.

The court had no difficulty in concluding that the statute constitutes a valid exercise of the police power. The construction and maintenance of highways is an inherently governmental function, it was pointed out, which belongs primarily to the state and may be exercised by it as a part of the police power in connection with the general welfare.

The court noted that many of the

smaller communities and utilities might not be able to sustain the cost of removing and relocating utility facilities in connection with the interstate highway construction program, and that if provision for the reimbursement of this cost were not made, the interstate highway program might be delayed. Conceivably, to require the state to bear this cost would cause a more equitable distribution of it than if the utility owners were compelled to pay it alone.

Moreover, if a state fails to comply with the requirements of the Federal Aid Highway Act and thereby does not obtain federal reimbursement to the extent of 90 per cent of the expenditures for relocation of facilities, that state is, nevertheless, required to pay a general tax covering the relocation of facilities in other states which do comply with the federal statute.

Utility facilities, the court observed, are for the benefit of all the people in the communities which they serve. They now constitute one of the important purposes for which highways are constructed and

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should be recognized and treated as such.
Delaware State Highway Department v.

Delaware Power & Light Co. et al. 167
A2d 27.



Stock Dividend Approved

THE New York commission authorized Niagara Frontier Transit System, Inc., to issue \$49,330 par value of reacquired common stock as a stock dividend.

The company proposed to transfer this sum from surplus to capital, as required by statute. The company's depreciation reserve was found to be adequate, and its book surplus amounted to nearly \$7 million. The funds used to reacquire the stock came from the sale of unused utility property.

It was alleged in the application that the company had recently expended for the acquisition of property in excess of \$49,330 from income or other moneys in the treasury not obtained from the issuance of stocks, bonds, notes, or other evidences of indebtedness. This satisfied a statutory requirement for a finding that such amount has been expended for one or more of several statutory purposes, including the acquisition of property. *Re Niagara Frontier Transit System, Inc. Case 21551, February 14, 1961.*



State Authority over Interstate Railroad Crossing

EVEN though a railroad company has a certificate from the Interstate Commerce Commission, it must obtain authority from the state commission before constructing a track across another railroad track, the South Carolina supreme court ruled. Under a state statute the commission is given authority to regulate and control any crossing by one track of another. This statute is not limited to grade crossings but applies to any other crossing, such as the tunnel involved in this case.

The legislative purpose in this enact-

ment is a proper exercise of the police power to insure the safety and convenience of the public, said the court. Although the Interstate Commerce Commission has exclusive jurisdiction over the extension of the lines of railroads that are engaged in interstate transportation, the state is not thereby deprived of its police power to regulate reasonably the location and construction of facilities in order to insure the maximum safety and convenience of the public. *Atlanta & Charlotte Air Line R. Co. et al. v. Spartanburg Terminal Co.* 117 SE2d 574.



Cash Working Capital Disallowed as De Minimis

THE Pennsylvania commission, in granting a water company increased rates which would produce a return of 5.9 per cent on the fair value rate base found reasonable, disallowed a cash working capital allowance after determining that the net time lag was inconsequential and that the small amount would

require further negative adjustment in view of accrued taxes.

In view of the fact that the company conducted its quarterly billings on a cyclic basis, the commission felt justified in rejecting the average time lag of 105 days in receipt of operating revenues. The company would initiate the quarterly

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cycle by billing one-third of its customers following the first full month of service, another third after two months, and the remainder after three full months of service. Essentially, therefore, the average time lag in receipt of operating revenues, regardless of the amount, would be the same as for monthly billings.

Special Legal Expense

The company had claimed an amount for special legal fees incurred during the test period resulting from litigation against a contractor who damaged the company's distribution system facilities while installing sewer lines. The commission did not consider the special legal fees to be proper charges to operating expenses, and disallowed them.

Consolidated Tax Return

The company, as it had contended in previous cases, sought to abolish the al-

location of consolidated tax savings resulting from filing its return with its affiliates and parent. The commission refused. The benefits attached to the filing of a consolidated return should be distributed equitably, it said. The tax liability should be apportioned among the companies included in the consolidated tax return in the manner prescribed by the Internal Revenue Code. Section 1552(a), subsections (1) and (3) provide for allocation of consolidated tax liability in proportion to the respective contribution to taxable income.

The commission noted, also, that it had decided, in recent cases, that the experience of the company resulting from its participation in a consolidated tax return during the latest five-year period should form the basis of the determination of a reasonable consolidated tax saving rate. *Pennsylvania Pub. Utility Commission et al. v. Riverton Consol. Water Co. C. 17439, C. 17438, March 20, 1961.*



Air Certificate Modification Not Revocation

ALASKA AIRLINES, appealing from a CAB order amending its certificate, claimed that the board's action, in changing its operation from a combination trunk and feeder service to a trunk service alone, had actually resulted in a revocation of its original certificate. An allegation of illegality was made since the carrier had not been guilty of any intentional violations.

The board disagreed. Notwithstanding that the order resulted in a reduction in route miles from 3,947 to 993, and in the number of communities served from 83 to nine, the certificate modification had reduced the carrier's operating expenses 15.8 per cent, its overall revenue 7.4 per cent, and revenue ton miles (volume of traffic) only 2.2 per cent, although reve-

nue plane miles (miles actually flown) were reduced 16 per cent. The basic nature of the carrier, that of a trunk-line operation, had not been transformed.

Public Interest Dominant

The requirements of the public interest were considered by the court to be dominant in the statutory plan for modification or amendment of air certificates. A realistic view of the public interest had to include economics effects, said the court. It would be unrealistic to hold that the public interest was concerned only with route miles and points served. These are important factors, but so are the overall economic factors of revenue, expense, and volume of traffic.

The board's action did not materially

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alter these latter factors. It had actually bettered the net revenue prospects. The certificate modification had left the carrier as the major intra-Alaska carrier.

Substantial Subsidy Reductions

The board's objectives in modifying the certificate were to facilitate a reduction in the subsidy requirements of Alaskan air service and the provision of improved services. The changes would reduce the carrier's break-even need by 33½ per cent. It would no longer be required to maintain small aircraft but

could give full attention to its economically more important trunk operations. The smaller carriers which had been assigned the bush operations had less indirect costs and could also achieve additional cost savings from increased utilization of their equipment and facilities.

The court agreed that substantial reductions in subsidies are a material factor in determining the public convenience and necessity, so long as the operating service is not impaired. *Alaska Airlines Inc. v. Civil Aeronautics Board*, 285 F2d 672.



Interlining to Initiate New Service Not Permissible

THE North Dakota commission had some interesting comments to make in a case where it found an irregular route motor carrier conducting a regular route operation and making no attempt to solicit or carry shipments destined to points not on the regular routes. The company had been using its authority primarily for the purpose of interlining with another carrier over regular routes.

Although the fact that most of the shipments handled by the company were interlined did not in itself demonstrate any impropriety in the method of operation, the commission thought it tended to confirm the conclusion that the company was making no attempt to conduct an irregular route operation. It directed the company to elect which method of operation it would use in the future, and to obtain the required authority by proper application if it chose a regular route operation.

Interlining by Special Carriers

Whether special carriers could lawfully interline was not specified as an issue to be considered in the proceeding, but

the commission's obiter dictum on this point was intended to inform the industry of its position.

Generally speaking, interlining is an accepted practice in the motor carrier industry and is ordinarily considered desirable since it permits a carrier to offer a more complete service to the territory or route it is authorized to serve. It involves the practice of two carriers combining their operating authority so as to enable them to transport shipments between points that neither would be authorized to transport from origin to destination under its individual certificate.

The nature of the interlining in the instant case was not conducted for the purpose of providing a more complete service to those located within the company's territory. The carrier interlined with had the same authority. What they were doing was to interline at a site specified in both their certificates, one of the carriers bringing it to that site, the other carrier transporting it from that site.

By combining authorities in this manner, the carriers were able to render

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service between any two points in the state so long as the shipment was routed through the site.

The commission thought that interlining in this manner was improper because it subverted the real purpose of interlining, which was to provide service to the carriers' certificated territory or route, and it permitted the initiation of service by carriers in territory in which neither carrier had proven the existence of pub-

lic convenience and necessity. In other words, the commission did not believe it permissible to interline when the effect thereof was to indirectly negate the public convenience and necessity requirements of the motor carrier law. The device of interlining, said the commission, cannot be used to initiate a new service. *Midwest Motor Express, Inc. v. Minot Van & Storage, Inc. Case No. S-1435, Sub 1, December 19, 1960.*



Tractor and Hopper Type Vehicles Not Sand and Gravel Trucks

THE Oregon commissioner held that a permit issued to a company using tractor and hopper type semitrailers and full trailers in connection with highway and other construction projects was null and void because it had been issued without a hearing and order. Applicable statutes permitted the granting of permits without hearing and order to operate trucks equipped with dump bodies commonly known as sand and gravel trucks.

The issue was whether the language used in the statute included the combination of vehicles used by the company. Words used in a statute are to be given

their usual and commonly understood meaning unless it is plain from the statute that a different meaning is intended, the commissioner pointed out.

It is also a general rule that commercial terms used in a statute relating to trade or commerce are presumed to have been used in their ordinary trade or commercial sense. The evidence had been substantial that the type of vehicles used by the company were not considered in the industry to be sand and gravel trucks. Therefore, a hearing had been required. *Singleton v. Cement Distributors, Inc. FA 7228, Order No. 37549, December 9, 1960.*

Other Recent Rulings

Construction of Tariff. The U. S. district court pointed out that a motor common carrier tariff should be construed as would any other document if the language of the tariff is not technical and words are used in their ordinary meaning, but if the words are used in a technical sense, or if understanding of the principles of cost allocation that underlay

the computation of the tariff is crucial to its interpretation, the issue should be referred to the ICC. *Porto Transp., Inc. v. Consolidated Diesel Electric Corp. et al. 189 F Supp 8.*

Employee Protection. The U. S. district court held that the provisions of the Interstate Commerce Act governing rail-

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road mergers do not require the ICC to impose as a minimum upon every transaction approved by it the condition that every employee affected must be retained in an employment status for a period equal in time to his service with the railroad carrier, not to exceed four years, so long as compensatory protection is granted in the event of displacement or discharge. *Brotherhood of Maintenance of Way Employees v. United States*, 189 F Supp 942.

Review of Administrator Decisions. The U. S. court of appeals held that it has no jurisdiction to review an administrator's decision made pursuant to the Federal Airport Act, that it could only review administrator decisions made pursuant to the Federal Aviation Act which were formally committed to the Civil Aeronautics Board. *Schwab v. Quesada*, 284 F2d 140.

Substantial Compliance. The U. S. court of appeals held that the fact that a contract between a motor carrier and another party was not in strict accordance with an Interstate Commerce Commission order does not bar recovery for services rendered under the contract by the party where the contract was entered into in good faith and was in substantial compliance with the Interstate Commerce Commission order. *General Freight Transp. Co., Inc. v. Riss & Co., Inc.* 284 F2d 836.

Certificate Requirements. The California supreme court held that an oil company which sold gas to a power company from additional recently acquired reserves was not required to obtain a certificate if it had not dedicated the reserves to peaking services or for services to its company town. *Richfield Oil Corp. v.*

California Pub. Utilities Commission et al. 358 P2d 686.

Interim Telephone Rates. The Wisconsin commission granted a telephone company an interim rate increase, and considered the return of 4.1 per cent on the net investment rate base justified, until the company has completely converted to dial operation and compiled operating experience upon which permanent rates can be based. *Re Chibardun Teleph. Co-op, Inc.* 2-U-5442, December 22, 1960.

Telephone Service Certificate. The Indiana commission granted Indiana Bell Telephone Company a certificate to serve an area formerly served by another company upon a showing that the company previously serving the area was willing to relinquish its authority and that Indiana Bell was ready, willing, and able to supply such service. *Patrons of Paragon Mut. Teleph. Co. v. Smithville Teleph. Co., Inc.* No. 28138, January 27, 1961.

Small Amount of Equity Capital. The Wisconsin commission approved a return of 3.73 per cent on a telephone company's net book value rate base and a return of 22 per cent on equity capital where the company had a very small percentage of capital stock equity and there was a relatively greater implied risk to such equity. *Re Peoples Teleph. Co.* 2-U-5436, January 27, 1961.

Splitting Telephone Exchange Area. The Minnesota commission said that splitting a telephone exchange area so that toll charges would have to be paid by neighbors to call each other is imprudent and not in the public interest when there is a community of interest

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among the residents and a majority of such residents desire service from one of the exchanges. *Re Dahlgren et al. M-4664, February 2, 1961.*

Telephone Company Return. The Illinois commission considered a return of 5.7 per cent on a telephone company's book cost rate base reasonable. *Re Mar-sailles Teleph. Co. No. 47411 February 7, 1961.*

Restoration of Telephone Service. The New Jersey commission held that a telephone company was justified in refusing to restore service which had been discontinued where there was objection to such restoration by proper governmental authority. *New Jersey Bell Teleph. Co. v. Lupo, Docket No. 6010-695, February 8, 1961.*

Telephone Boundary Line Retained. The North Carolina commission refused to order a change in a long-established boundary line between two telephone companies as requested by several complainants, since other subscribers in the area preferred to retain their present service and, moreover, both companies would be subjected to a financial burden in effecting the proposed change. *Ratcliffe et al. v. North State Teleph. Co. et al. Docket No. P-55, Sub 288, February 8, 1961.*

Interim Telephone Rates. A small telephone company was granted an interim rate increase by the Wisconsin commission sufficient to afford a rate of return of 6.5 per cent on a net book value rate base, pending conversion to dial operation and the establishment of permanent rates. *Re Gleason Teleph. Co., Inc. 2-U-5473, February 10, 1961.*

Wage Expense Reduced. The pro forma wage expense of a small telephone company per main station was reduced by the Wisconsin commission for rate-making purposes, based on a comparison with other similar companies' wages charged to operating expense. *Pulaski Merchants & Farmers Teleph. Co. 2-U-5477, February 16, 1961.*

Extended-area Service. The Ohio commission pointed out that the commission has authority to order extended-area telephone service where the facts warrant without at that time conducting a full rate case to determine whether or not any rate relief is necessary. *Bordner et al. v. Northern Ohio Teleph. Co. No. 28,631, March 29, 1961.*

Notice of Procedural Changes. The Civil Aeronautics Board has adopted procedures whereby individual personal responsibility would be assigned to commission members in the preparation and issuance of its opinions in formal hearing cases. Heretofore, the opinion writing division, in the office of general counsel, prepared, in accordance with the board's instructions, a draft of a proposed opinion which was submitted concurrently to all members of the CAB. Henceforth, cases which are ripe for decision will be assigned by the chairman to an individual member of the board who will be responsible for preparation and submission of the opinion. Opinions will be issued in the individual name of the CAB member responsible, with the concurrence of other members noted. Dissenting and separate concurring opinions may be appended to the majority decision. A similar procedure regarding individual responsibility for preparation of opinions was inaugurated by the SEC in January. *Civil Aeronautics Board, April 7, 1961.*

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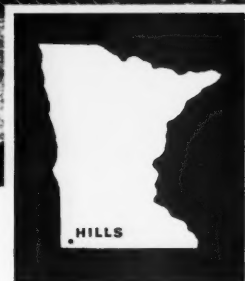
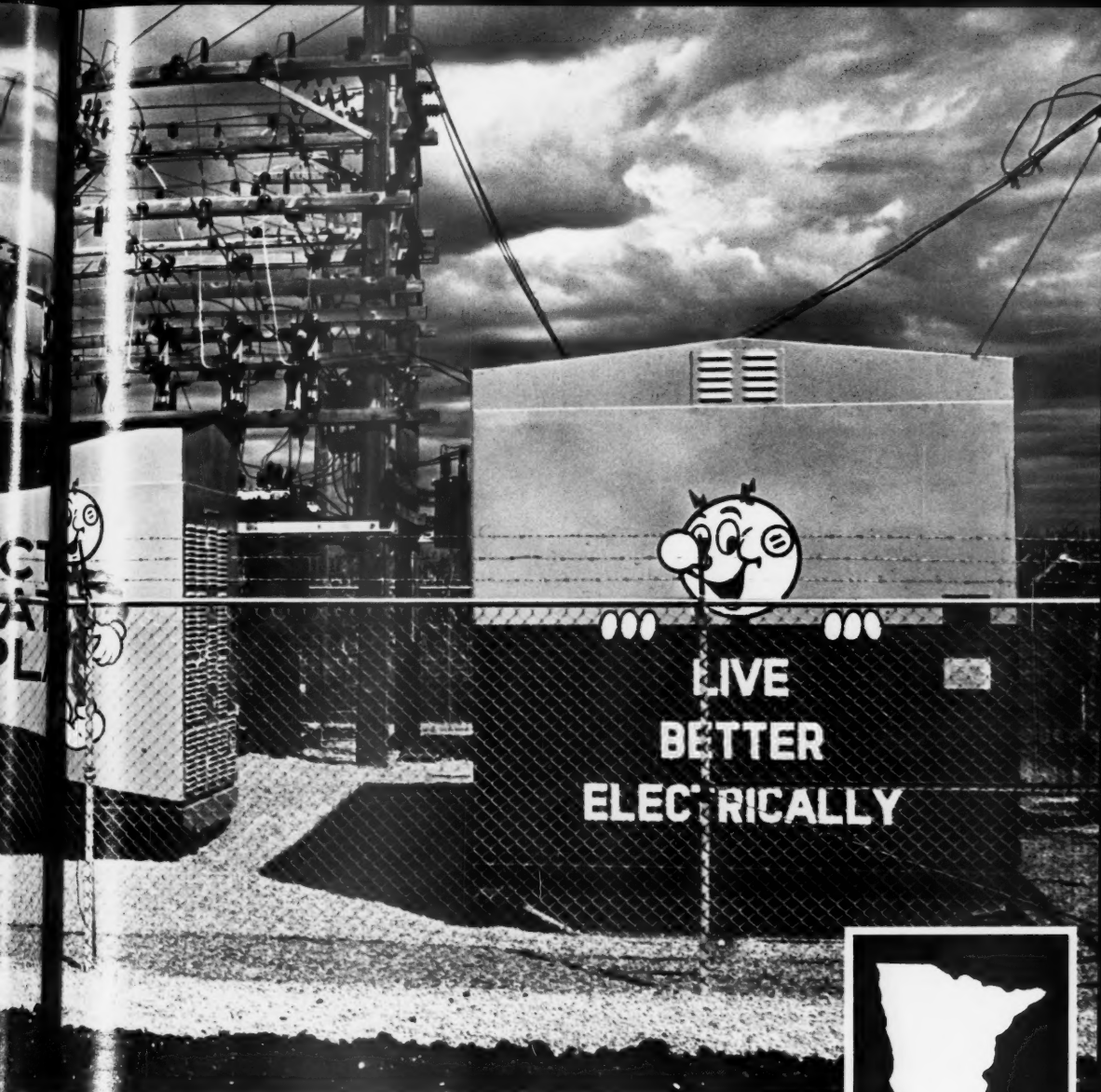
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Combustion Engineering Ships First of Ten Generators to AEC Hanford Works

COMBUSTION Engineering, Inc., has announced the shipment of the first of ten steam generators to service the Atomic Energy Commission's New Production Reactor at Hanford Works, Richland, Washington. According to a recent statement in the press, the Administration has decided to use the steam produced by the generators to serve a generating facility with a capacity of 700,000 kilowatts (subject to congressional approval). This will make Hanford by far the largest nuclear power plant in the world. Power produced will be one-third more than the output of the huge Bonneville Dam nearby on the Columbia river. Supplied under a \$4.3 million contract, the steam generators will produce steam with heat from cooling water issuing from the Hanford plutonium-making plant.

Called the C-E Tube Manifold Steam Generator, the unique steam producer is a completely shop-assembled, welded unit. It incorporates novel design features and virtually eliminates restrictions formerly imposed by wide fluctuations in capacity, temperature and pressure occurring in nuclear power applications. The generators are cylindrical vessels with elliptical heads (with 16-in. manways). This pressure vessel contains both the steam generating surface and steam separating equipment. One interesting new design feature is the use of a cylindrical, centrally located tube manifold instead of the

commonly used tube sheet. Combustion Engineering, Inc. has applied for patents covering this new steam generator which is expected to find applications other than nuclear especially in power plants requiring large amounts of high pressure, high purity steam.

Specifications for the steam generators were prepared by Burns & Roe, Inc., Architect-Engineers for the heat dissipation system. Kaiser Engineers are contractors for the project.

Combustion Engineering is one of the world's largest manufacturers of conventional types of steam generating and related equipment for utility, industrial and marine power plants. Its nuclear work includes numerous heavy components for naval and stationary power plants as well as the design and manufacture of the complete reactor power system for the submarine Tullibee, commissioned last year.

Otter Tail Power Finds Lignite More Economical

OTTER Tail Power Company, Fergus Falls, Minnesota, has proven that lignite can effect operating efficiencies in power generation. Using North Dakota lignite as fuel in its new Hoot Lake Station, Otter Tail has achieved a substantially lower unit cost of production.

The company has been a pioneer in the use of such fuel for power generation, and the 400,000 lb/hr unit at the Hoot Lake station is the largest steam generating unit in the United States to use North Dakota lignite. Control systems were manufactured by Hagan Chemicals & Controls, Inc., Pittsburgh, Pennsylvania.

After nearly a year's operation, company officials state that the control systems have performed excellently. In fact, during a number of unusual operating conditions, that could not be anticipated, the control

systems continued to operate automatically and satisfactorily. Additionally, one official noted that "the control systems have been largely responsible for the fact that the new unit is operating at a level equal to its sign rate, despite the high moisture content (30-35%) and low heat value of the lignite fuel."

The \$11,500,000 addition to company's network of stations, its largest, was designed by Burns & Roe, New York.

For additional information on utility controls and systems for steam generating units, write or phone L. M. Faulkner, Hagan Chemical Controls, Inc., Hagan Center, Pittsburgh 30, Pennsylvania.

California Oregon Power Build \$6,585,330 Hydroelectric Project on Klamath River

THE Federal Power Commission has amended a license issued to California Oregon Power Company, Medford, Oregon, to allow the company to construct a \$6,585,330 hydroelectric project on the Klamath river in Siskiyou county, California.

California Oregon's proposed Iron Gate development will consist of an earthfill dam about 173 feet high creating a reservoir with a storage capacity of about 58,000 acre-feet, concrete spillway, tunnel, powerhouse with an installed capacity of 180 kilowatts, and appurtenant facilities. The primary purpose of the dam is to regulate stream flows.

As originally licensed, on January 13, 1960, the proposed Iron Gate development would have been a reinforced concrete arch dam, about 173 feet high, used solely to regulate stream flows. The cost of this construction was estimated at about \$1,835,000. In 1967, Copco planned to increase the height of the dam to 170 feet and build a powerhouse with an installed

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city of 25,000 kilowatts. The final FPC license did not authorize the company to build any of the second facilities.

In its application for an amended license, the company said it would be permitted to build a single-stage earth dam rather than the two-stage concrete dam.

Hubbard Names Hollingsworth Vice President, Sales; Moving Executive Offices

OMAS HOLLINGSWORTH has been elected vice president in charge of sales of Hubbard and Company, pole line hardware and electrical apparatus manufacturer. He was recently general sales manager for Hubbard.

Hubbard and Company is moving its executive offices from Michigan Avenue to their main factory located at 5401 W. Roosevelt Road, Chicago, in May of this year.

Included in the move will be manufacturing and sales offices, legal and engineering departments. Reasons for the change are to obtain a still further improvement in customer service means of a closer contact between executive, sales and production departments.

West Penn Power Announces \$86,000,000 Program

WEST Penn Power Company plans to spend over \$86,000,000 in the next five years on a construction-expansion program that will provide improved electric service facilities and increased supply in nearly every part of its 8,600-square-mile territory in southwestern and north central Pennsylvania, according to an announcement by Streuby L. Drumm, president.

The biggest item is the new 250,000-kilowatt unit—which will become the largest single one on the three-company Allegheny Power System when completed—at Mitchell power station on the Monongahela river, near the mouth of Monongahela.

Cost of that unit and its related facilities is approximately \$43 million. Construction starts this month and the unit scheduled for operation in the late summer of 1963.

Other major categories in the construction expansion program are: \$1,518,000 for distribution substations and lines; \$6,493,600 for new equipment, such as large capacity transformers, oil circuit breakers,

and regulators for substations, plus new service buildings and the remodeling of present structures; and \$5,922,600 for transmission substations and lines.

Of the three-year total, West Penn Power expects to spend about \$21,000,000 this year for new construction and expansion.

1960 Gas Air Conditioning Business Double Volume Of 1958

AN American Gas Association survey shows that new gas air conditioning installed in 1960 totaled 141,000 tons — double the business done just two years ago. The figures are based on responses from 208 gas utilities in 41 states and the District of Columbia.

New Consulting Firm Cites Cost Reduction Opportunities

JAMES L. ALLEN, chairman of the partnership of Booz, Allen & Hamilton, nationwide 47-year-old management consulting firm, recently

announced the formation of an associated corporation, Booz, Allen Methods Service, Inc., industrial engineering consultants. The new company will provide specialized consulting services to increase profits through improved productivity and utilization of personnel, facilities, materials and equipment. The company will serve clients primarily in utilities, transportation, banking, manufacturing and non-profit institutions. Initially, the corporation is opening offices in New York, Chicago and Los Angeles.

The new firm cited the opportunities for lower costs available to utilities through proper application of advanced industrial engineering techniques. Singled out were areas of field crew measurement and office clerical cost reduction. Formation of the firm consolidates extensive experience in these areas.

Harry E. Figgie, Jr., formerly a partner of Booz, Allen & Hamilton's Cleveland office, has been elected president of the company.

(Continued on page 20)

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April 4, 1961

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Colorado Interstate Gas Continues Expansion Program

COLORADO Interstate Gas Company, Colorado Springs, Colorado, reports that total system additions for 1960 amounted to \$7,740,245.

The company's proposed expansion program involves new facilities to strengthen Rocky Mountain area transmission facilities and to provide gas to southern California markets.

Michigan Bell to Spend \$86 Million

PLANS for expansion and improvements of service costing \$86,700,000 were announced recently by the Michigan Bell Telephone Company.

The company has set aside \$42.5 million to enlarge customer service as a result of growth; \$14.4 million for improvements, and \$29.8 million for replacement of worn-out equipment and the in-and-out movement of telephones.

More than 4.7 billion feet of cable—enough to reach four times from the earth to the moon—will be installed. Nine new buildings and additions to seven others are to be erected.

Eight building additions started in 1960 are scheduled for completion this year.

Kentucky Utilities to Build New \$17.5 Million Unit

KENTUCKY Utilities Company has announced plans for a huge \$17.5 million generating unit which will more than double the electrical capacity of its E. W. Brown generating station at Dix Dam, Kentucky.

The new generator, scheduled to be in operation in June, 1963, will be the largest in the KU system and have a capacity of 156,250 kilowatts.

F. I. Fairman, Kentucky Utilities president, said the new unit will burn about 400,000 tons of Kentucky coal during its first full year of operation. The first generating unit at the plant, installed in 1957, has a capability of 105,000 kilowatts and used 200,000 tons of Kentucky coal last year.

G-E Air-blast Circuit Breaker Interrupts Power Faults in Less Than Two Cycles

THE world's fastest operating transmission-type power circuit breakers harmlessly extinguished in less than

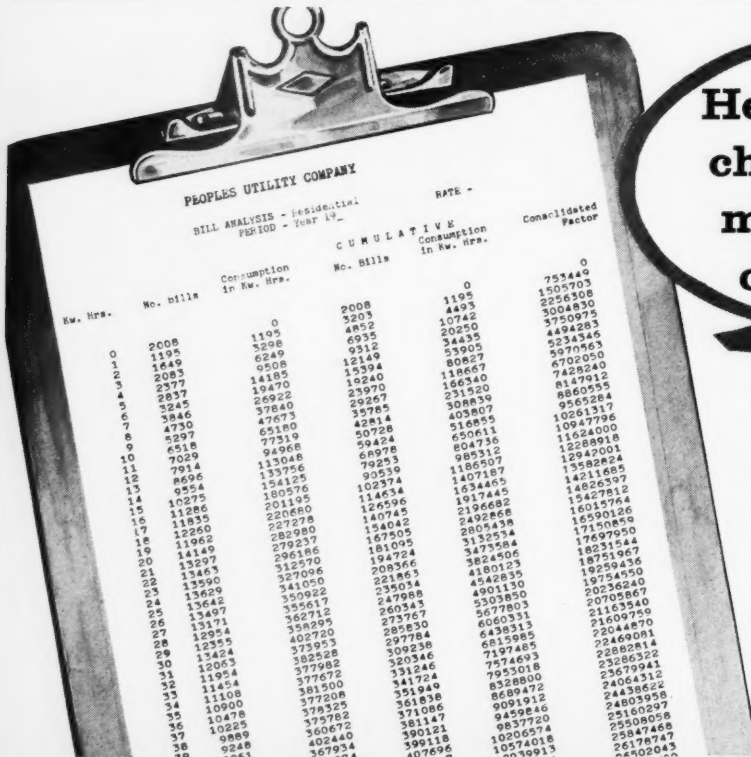
two cycles the highest currents recorded on field tests for 13 equipment, according to a G-E ment.

On April 8 and 9 the breaker successfully interrupted 40,000 amperes at the American Electric Power Co.'s Philip Sporn plant, substations, New Haven, West Virginia.

Maximum clearing time for tests did not exceed approximate cycles. Industry standard is three cycles for conventional dead-tank breakers.

Another industry first, the twelve, 138 kv. air-blast breakers, manufactured by General Electric's Voltage Switchgear Department, Philadelphia, Pa., were put through rigorous tests for transmission line and bus faults, both grounded and ungrounded.

American Electric Power Co., Inc., and General Electric Co. co-operated to conduct a comprehensive series of tests on the equipment. Power interruption tests with faults ranging from 9,100 to 40,000 amperes were carried out to prove the breaker's capability to interrupt faults within two cycles, officials said.



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INDUSTRIAL PROGRESS—(Continued)

Gas Industry Safety Record Improved In 1960 For 13th Consecutive Year

employee safety record in the gas industry improved in 1960 for the thirteenth straight year, according to a preliminary survey by the American Gas Association. Sampling of representative companies indicates accident frequency in 1960 was at an all-time low and nearly 13 per cent lower than in 1959. The preliminary report indicated there were 6.24 injuries per million man-hours in 1960 which caused employees to lose one or more work days. The high was in 1947 when the frequency was 10.5 injuries per million man-hours. A.G.A. reported that the number of lost-time injuries in the fourth quarter of 1960 declined 12.5 per cent from the same period the previous year. In the fourth quarter of 1960, there was a 15.8 per cent drop in the number of permanent partial disability injuries and a 13.5 per cent fall in temporary disability injuries. The average number of days charged injury increased 25.7 per cent and 14.5 per cent respectively. The sample group included 83 gas distribution and utility companies. A complete survey of the safety record of the gas industry will be issued in about two months by A.G.A.

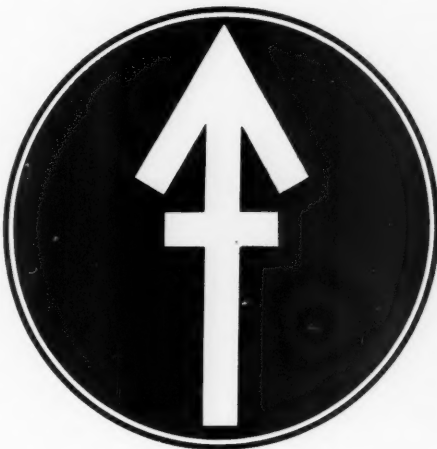
Tower Construction Offers Check List for Tower Inspection

MICROWAVE tower inspection and maintenance check list is being offered free to any interested firm by the Tower Construction Company, Sioux City, Iowa. According to the company, the check list is a handy pocket size booklet that has proved extremely useful to those involved in inspection and maintenance of microwave Towers. The list emphasizes what should be checked, and the frequency with which inspection should be made. The check list points what to look for; how to inspect and how to repair or replace that which inspection shows needs correction. The routine Tower maintenance program is also recommended and outlined in the contents. Those interested should write Tower Construction, 2700 Hawkeye Drive, Sioux City, Iowa, specifying the number of maintenance check list booklets desired. When ordering, also specify whether an English or Spanish edition is desired.

Electric Utilities Trend To Mobile Equipment Noted

GROWING trend by electric utilities to buy mobile generators and mobile transformers is noted by General Electric's Power Transformer Dept., Pittsfield, Mass. According to the company, over 300 mobiles have been purchased by utilities from all electrical manufacturers in the past 20 years. Fifty-five per cent of total kva and 36 per cent of the units have been bought in the past three years alone, indicating a decided increase in the use of this equipment. General Electric records also show that 55 per cent of the mobile units and 65 per cent of the kva shipped in the past year have been in the form of mobile

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INDUSTRIAL PROGRESS—(Continued)

transformers, rather than complete mobile substations.

The figures are released by C. A. Shelton, General Electric sales manager, following the shipment of the Company's millionth kva of mobile equipment—a 15,000 kva mobile substation to Virginia Electric Power Company.

Shelton sees several reasons for the growing utility use of mobiles. The most important is the availability of more and more kva per pound in mobile equipment which has answered a need for mobiles to service larger and higher-voltage substations. He cites the fact that nearly 60 per cent of all G-E mobiles shipped in the past year have been rated at over 7,500 kva. The company has shipped units rated 40,000 kva, 230 kva and has the capability to go even higher, and meet essentially the same weight limitations.

Utility purchasers realize savings in system investment by having one mobile service a number of substations, rather than locating spare equipment in each substation or in scattered locations.

Mobile equipment used in this manner can help restore service fast during temporary periods of emergency. They can also be used to carry a substantial load while maintenance and construction is being performed, permit careful scheduling of maintenance work and carry loads while substations are being uprated or changed over.

4,000-Mile Transmission Grid Planned for 8-State Area

PLANS for a 4,000-mile network of extra-high-voltage electric transmission lines in the Southwest were cited recently as the latest step in the continuing growth of the investor-owned electric utility industry to meet the nation's future power needs.

Sherman R. Knapp, president of the Edison Electric Institute, and president of The Connecticut Light & Power Company, noted that the new transmission grid will make available interconnections of greater capacities than ever before for electric power systems in an eight-state area composed of Arkansas, Kansas, Louisiana, Mississippi, Missouri, Nebraska, Oklahoma and Texas.

"For many years, the nation's electric utility companies have been developing great 'power pools' through which they can interconnect their systems and co-ordinate their operations to best meet combined load require-

ments," Mr. Knapp said. "The announced for the Southwest nates more than three years of and planning by the electric omies in that area. As in all inter- nected systems, the purpose of new grid is to provide greater security of service to customers and effect improved efficiencies and omies in electricity production."

The extra-high-voltage grid, mated to cost more than \$300 million will be designed for initial operation of 345,000 volts, with provision for future enlargement to 500,000 volts when needed. The 345,000 volt line will be six times greater in power capacity than any other transmission line now operating in Southwest.

"Almost all the electric power producing capability in this country now interconnected," Mr. Knapp said. "More than 20,000 miles of transmission lines are of extra-voltage—230,000 volts and above."

Noting that the United States annually produces three times as much electricity as Russia, the second-largest nation, Mr. Knapp said that in 1959 the electric industry in this country had 304,220 miles of transmission lines of 35,000 volts and above. Russia had only 62,877 miles of transmission lines—about one-fifth as much for a land area 2½ times as great as the United States.

"The demand for electricity in this country is doubling about every seven years," the Institute president said. "As generating capacity has grown, the interconnection and pooling of power has been accelerating all over the United States. Extensive interconnections have been made. More is projected. This development is being aided by long-range planning on a regional basis, and helped along through studies by such organizations as the Edison Electric Institute."

Northern Natural Gas and Houdry Join in Effort to Develop Natural Gas Fuel Cell

NORTHERN Natural Gas Company and Houdry Process Corporation, Philadelphia, have established a joint program to develop a natural gas fuel cell.

Announcement of the joint venture was made recently by M. L. Mendenhall, senior vice president of Northern, and T. A. Burtis, Houdry president.

"The research program will be

said, "The Southwest... research has been in progress for some time. We are very hopeful this joint venture will meet with success," Mr. Mead said.

The goal of the two companies is to produce electricity right in homes and factories by using a fuel cell powered with natural gas which will supply all of the energy requirements of the household or business at costs significantly less than current sources. Development of the natural gas fuel will be one of the greatest steps forward in the energy field in modern times, according to Mr. Mead.

A fuel cell resembles a storage battery which is continually recharged by a supply of fuel and air. As the fuel and air are fed into a cell, a catalyst performs a marriage of the elements, directly producing electricity without the complex equipment required under the standard system," Mr. Mead said.

Characteristically, the fuel cell has

more than doubled the fuel efficiency of a conventional electrical generating system. An additional benefit would arise because the energy arriving through the natural gas service line would not be subject to interruptions from adverse weather or storms.

Mr. Mead said the catalyst is the critical part of a fuel cell. Houdry will contribute its 30 years' experience in catalysis to the project.

24 Styles of Utilities Receipting Machines Offered by Gibson

A. C. GIBSON Co., Inc., 70 Oak Street, Buffalo, New York, announces a selection of 24 styles in utilities receipting machines with automatic stub and coupon cutters, designed to accommodate any specific requirement or bill size. All machines are ready for immediate delivery from stock.

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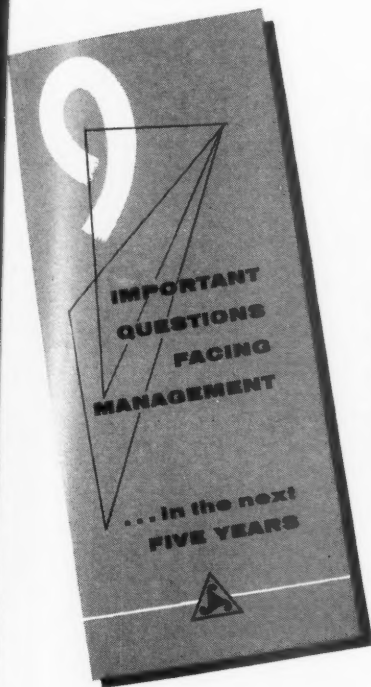
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A-C Bulletin On "Endure-All" Distribution Transformers

OPERATING and maintenance benefits of the *Endure-All* distribution transformers are described in a new bulletin released by Allis-Chalmers.

Features include a new design which reduces impedance by as much as 25 per cent. New locked core-and-coil construction which eliminates 32 pieces of hardware, and 10 per cent lighter and lower units for easier handling.

Copies of "All New *Endure-All* Distribution Transformers," 61B-9943, are available from Allis-Chalmers, Milwaukee 1, Wisc.



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HIGHLIGHTS OF THE YEAR

1960

Operating Revenues amounted to	\$319,162,000
<i>A new high — an increase of \$22,504,000 or 7.6%</i>	
Consolidated Net Income was	\$46,150,000
<i>Another new high — up \$2,953,000 or 6.8%</i>	
Earnings Per Share of Common Stock (year-end) were	\$2.06
<i>14 cents above the previous year</i>	
Dividends Per Share of Common Stock were	\$1.40
<i>Up 10 cents over 1959</i>	
Construction Expenditures totaled	\$170,077,000
<i>Drove 8½ million dollars from all-time high of 1959</i>	
Sales of Electric Energy, in kilowatt hours	22,760,000,000
<i>A new record, up 8.6%</i>	
Customers Served Directly increased to	1,576,151
<i>37,100 more than in 1959</i>	

*Serving the Heart of the South
through*

ALABAMA POWER COMPANY
Birmingham, Alabama

GEORGIA POWER COMPANY
Atlanta, Georgia

GULF POWER COMPANY
Pensacola, Florida

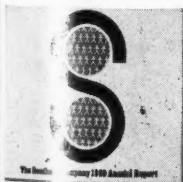
MISSISSIPPI POWER COMPANY
Gulfport, Mississippi

SOUTHERN ELECTRIC GENERATING COMPANY
Birmingham, Alabama

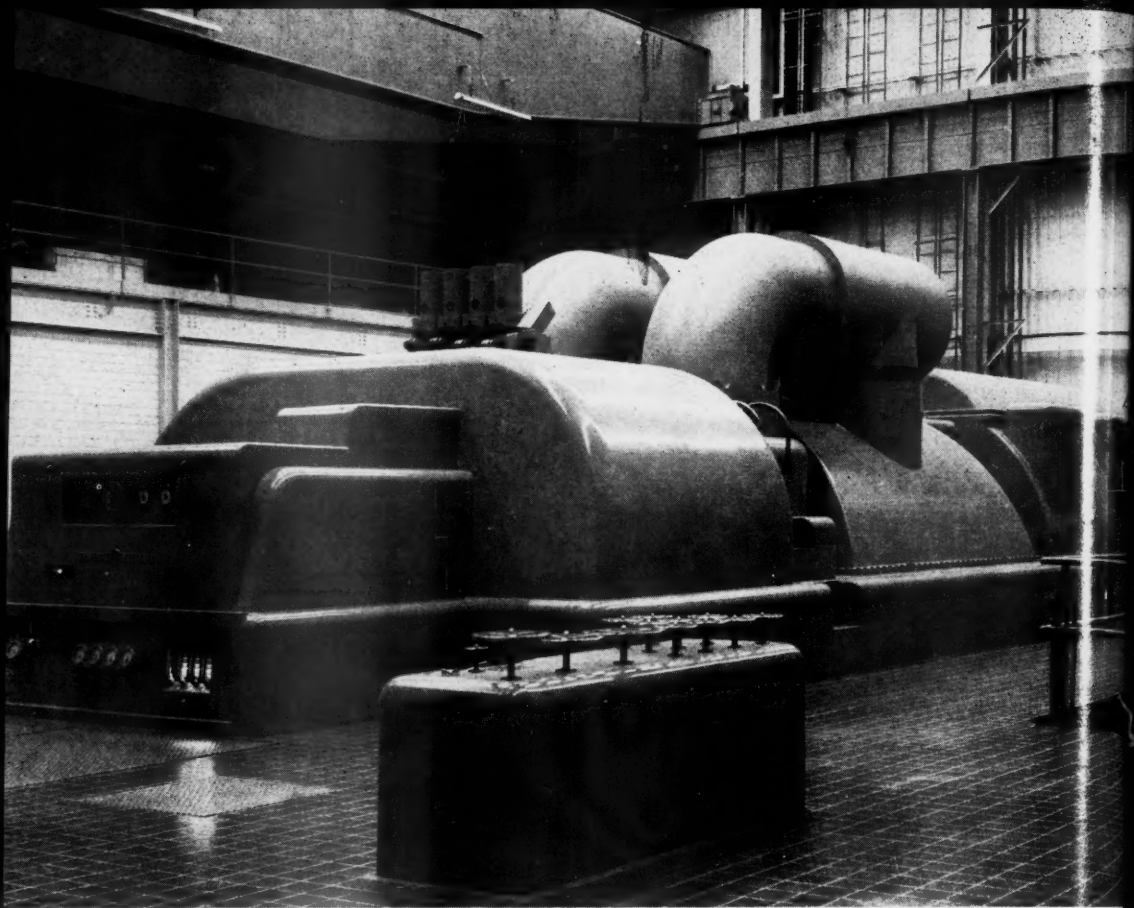
THE SOUTHERN COMPANY



ATLANTA • 1330 W. PEACHTREE STREET
BIRMINGHAM • 600 N. 18 TH STREET



Write for 1960 Annual Report: The Southern Company, 1330 West Peachtree Street, N.W., Atlanta 9, Georgia



Complete service complements product reliability when you install a General Electric steam turbine-generator such as this 125,000-kw, tandem-compound, double-flow, reheat unit in the E. D. Edwards Station of Central Illinois Light Company

Always an evaluation factor— General Electric's personalized turbine-generator service

General Electric's complete service program for steam turbine-generators is personalized to your specific system requirements—to help you in your continuing efforts to produce reliable, low-cost electric power. This nationwide service is readily available, to give you:

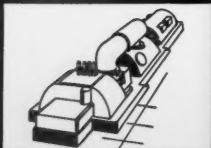
- turbine and generator engineering consultation
- installation planning and direction
- accelerated, on-time start-ups
- training of your personnel
- periodic service calls and consultation
- maintenance inspection and planning
- renewal parts scheduling
- priority repair service

At General Electric, service is always part of the value you receive . . . it is not curtailed when prices are soft, when orders are slow, when profits are down . . . it is always part of your steam turbine-generator.

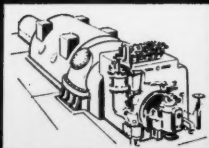
Progress Is Our Most Important Product

GENERAL  ELECTRIC

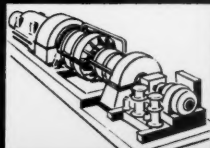
**General Electric
Turbine-Generators
Help Keep
Power Costs Low**



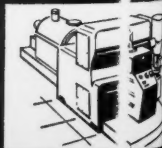
Steam turbine-generators for large blocks of power



Steam turbine-generators 100,000 kw and lower



Gas turbines for peaking, base load, combined cycles



Mechanical drive steam turbines for auxiliary